
APPENDIX H

TRANSPORTATION IMPACT ANALYSIS



HEXAGON TRANSPORTATION CONSULTANTS, INC.



401 to 409 Alberto Way

Final Transportation Impact Analysis (TIA)



Prepared for:

LP Acquisitions, L.L.C.



January 22, 2016



Hexagon Office: 4 North Second Street, Suite 400, San Jose, CA 95113

Hexagon Phone: 408-971-6100

Job Number: 15GB32

Client Name: Mr. Randy Lamb

Document Name: 401-409 Alberto Way TIA 2016-01-18.doc

San Jose • Gilroy • Pleasanton • Phoenix

www.hextrans.com

Areawide Circulation Plans Corridor Studies Pavement Delineation Plans Traffic Handling Plans Impact Fees Interchange Analysis Parking Studies
Transportation Planning Neighborhood Traffic Calming Traffic Operations Traffic Impact Analysis Traffic Signal Design Travel Demand Forecasting

Table of Contents

Executive Summary.....	iii
1. Introduction	1
2. Existing Conditions	8
3. Background Conditions.....	18
4. Project Conditions.....	21
5. Cumulative Conditions	33
6. Other Transportation Issues	38
7. Conclusions	45

Appendices

Appendix A:	New Traffic Counts
Appendix B:	Town of Los Gatos Approved and Pending Projects
Appendix C:	Volume Summary Tables
Appendix D:	Intersection Level of Service Calculations

List of Tables

Table ES-1 Intersection Level of Service Summary.....	viii
Table 1 Signalized Intersection Level of Service Definitions Based on Average Delay.....	6
Table 2 Freeway Segment Capacity Evaluation	6
Table 3 Existing Intersection Levels of Service Summary	12
Table 4 Existing Freeway Ramp Analysis	15
Table 5 Background Intersection Levels of Service Summary.....	20
Table 6 Trip Generation Summary	22
Table 7 Trip Generation Assuming Full Occupancy.....	23
Table 8 Background plus Project Intersection Levels of Service Summary.....	30
Table 9 Existing plus Project Intersection Levels of Service Summary	31
Table 10 Existing plus Project Freeway Ramp Analysis	32
Table 11 Cumulative Intersection Levels of Service Summary.....	34
Table 12 Queuing Analysis.....	39

List of Figures

Figure 1 Project Site and Surrounding Study Area	3
Figure 2 Project Site Plan	4
Figure 3 Existing Bike Facilities.....	10
Figure 4 Existing Transit Facilities.....	11
Figure 5 Existing Lane Geometry	13
Figure 6 Existing Traffic Volumes.....	14
Figure 7 Background Traffic Volumes	19
Figure 8 Project Trip Distribution	25
Figure 9 Net Project Trip Assignment.....	26
Figure 10 Background plus Project Traffic Volumes	27
Figure 11 Existing plus Project Traffic Volumes.....	28
Figure 12 Conceptual Drawing for Proposed Off-site Improvements.....	29
Figure 13 Cumulative Baseline Traffic Volumes	35
Figure 14 Cumulative plus Project Traffic Volumes	36

Executive Summary

This report presents the results of the Transportation Impact Analysis (TIA) prepared for the proposed office development located at 401-409 Alberto Way in Los Gatos, CA. The project site is located on the northwest corner of the intersection of Los Gatos-Saratoga Road (State Route 9) and Alberto Way. Existing uses on the project site consist of 30,000 square feet of office buildings. The project would demolish the existing buildings and replace them with a 93,500 ¹square foot office complex. Access to the project site would be provided via two driveways located on Alberto Way.

This study was conducted for the purpose of identifying the potential traffic impacts related to the proposed development. The potential impacts of the project were evaluated in accordance with the standards set forth by the Town of Los Gatos and the Santa Clara County Valley Transportation Authority (VTA) Congestion Management Plan (CMP). The traffic analysis is based on the AM and PM peak hour levels of service for five (5) signalized intersections two (2) freeway segments, and four (4) freeway ramps at the interchange of SR 17 and Los Gatos-Saratoga Road. Two of the study intersections are CMP intersections.

Per CMP technical guidelines, a freeway segment level of service analysis is required when a project would add trips greater than one percent of a segment's capacity. Although the proposed project would add trips greater than one percent of capacity on southbound SR 17 from Lark Avenue to Los Gatos-Saratoga Road during the AM peak hour, this freeway segment is currently operating at an acceptable LOS D during the AM peak hour. The increase in segment trips would not significantly impact the freeway LOS. Project impacts on other transportation categories, such as vehicle queuing, pedestrian, bicycle and transit facilities, site access and on-site circulation, were determined on the basis of engineering judgment.

Project Trip Generation

Daily and peak-hour trip generation estimates for the proposed project are based on trip rates published in the ITE *Trip Generation Manual*, 9th Edition for a general office building. The proposed new buildings are expected to generate 181 trips (159 in and 22 out) during the AM peak hour and 183 trips (31 in and 152 out) during the PM peak hour.

The existing buildings on the site are partially occupied and are generating traffic. Therefore, the traffic generated by the project will not be entirely new trips. Hexagon counted the site driveways to determine the number of trips currently being generated. The current trip generation is 42 trips during the AM peak hour and 81 trips during the PM peak hour. The difference between the project trips and the existing trips were added to the road network. This equates to 139 net new trips during the AM peak hour and 102 net new trips during the PM peak hour.

¹ Since the initiation of the traffic study, the project size has been slightly reduced to 92,800 square feet. This report analyzes the project assuming its original size of 93,500 square feet. Thus, the study slightly overstates the added traffic due to the project.

Intersection Levels of Service

The intersection level of service analysis concluded that all study intersections would operate at acceptable levels of service (LOS D or better) under all study scenarios. Therefore, the proposed project would have an insignificant impact on intersection levels of service.

Intersection levels of service results are summarized in Table ES-1.

Operations Analysis

Operational issues are not considered CEQA impacts. Therefore, they are included for informational purposes.

In order to accommodate left turn queues with the project, Hexagon recommends extending the eastbound left-turn pocket on Los Gatos-Saratoga Road to 250 feet. The existing 150 foot left-turn storage space would be insufficient to contain the queue with the project. With the proposed improvement to extend the eastbound left-turn lane to 250 feet, the 95th percentile queue during both the AM and PM peak hours would be sufficiently contained within the turn pocket. The applicant has agreed to make this improvement. Based on community input, Hexagon also recommends restriping the southbound leg of Alberto Way to include a right-turn lane and a shared left-through lane. Although not required to mitigate project impacts, the applicant has agreed to make this improvement. A dedicated right-turn lane would allow right-turn vehicles to bypass left-turn vehicles and turn onto westbound Los Gatos-Saratoga Road when Alberto Way has the red light and there are sufficient gaps to perform the turn.

The driveway on the east side of Alberto Way for the Best Western Inn is located approximately 125 feet north of the intersection. The queuing analysis shows that during the PM peak hour under all but the existing conditions, the 95th percentile queue on the southbound right-turn lane on Alberto Way (between 150 and 200 feet) would block vehicles at the Best Western driveway from turning into the right-turn lane. The 95th percentile queue in the southbound shared left-through lane on Alberto Way would not block the Best Western driveway. The 95th percentile queue during the PM peak hour in the southbound right-turn lane on Alberto Way would comprise eight vehicles. It is expected that the existing signal at the Alberto Way intersection would be able to clear all vehicles within each cycle. Right-turn vehicles on Alberto Way also will be able to turn onto westbound Los Gatos-Saratoga Road when there are sufficient gaps in westbound traffic on Los Gatos-Saratoga Road. Therefore, it is expected that vehicles at the Best Western driveway would be able to turn onto Alberto Way with minimal delays.

Recommendations

Although not related to project impacts, Hexagon recommends that the signal on Los Gatos-Saratoga Road at Alberto Way be upgraded, as well as interconnected to the signal on Los Gatos-Saratoga Road at Los Gatos Boulevard. These improvements would improve vehicle progression on Los Gatos-Saratoga Road, which would help left-turn vehicles turning onto Alberto Way maneuver out of the eastbound through lanes on Los Gatos-Saratoga Road and into the left-turn lane. This would improve the eastbound left-turn green phase utilization on Los Gatos-Saratoga Road, and reduce the potential for left-turn vehicles having to wait extra cycles to be able to clear the intersection and lengthening the left-turn queue. The project applicant has agreed to make these improvements.

Bicycles, Pedestrians and Transit

The project site is not connected to nearby bicycle facilities. Access to the project site via Los Gatos Boulevard would require bikers to share the road with vehicles for 800 feet on Los Gatos-Saratoga Road, which would be adequate for experienced cyclists. The lack of bicycle facilities leading to the site means that inexperienced cyclists would not be encouraged to ride to the project. The Town's planned Complete Streets project on Los-Gatos-Saratoga Road (Highway 9) could improve conditions for cyclists. The project would be required to contribute to this project via the Town's traffic impact fee.

At the intersection of Alberto Way and Los Gatos-Saratoga Road, the project voluntarily proposes to restripe the southbound leg of Alberto Way to include a right-turn lane and a shared left-through lane. The stop-bar for the shared left-through lane would be set back for a bike box. The voluntarily proposed bike box would increase bicyclist visibility for drivers and enhance bicyclist safety crossing the intersection. The conceptual drawings for the proposed off-site improvements are shown on Figure 14 in Chapter 4.

Pedestrian activity could occur between the site and downtown Los Gatos, located approximately ½ mile west, and the closest bus stops, located ½ mile to the west and ¼ mile to the east. While adequate, the pedestrian facilities could be improved. There are no sidewalks or crosswalks on the south side of Los Gatos-Saratoga Road through the SR 17 interchange, only on the north side. The project would be required to pay a transportation impact fee, which could be used to upgrade the pedestrian facilities in the area.

As shown on Figure 12 in Chapter 4, the project applicant voluntarily proposes to provide detached sidewalks with a landscape buffer on Alberto Way along the project site frontage, as well as on the north side of Los Gatos-Saratoga Road between Alberto Way and the SR 17 northbound on-ramp. Detached sidewalks with a landscape buffer would provide a wider buffer area between pedestrians and on-street vehicles.

There is no transit service on Los Gatos-Saratoga Road in front of the site. The closest service is about ¼ mile east on Los Gatos Boulevard or ½ mile west at N. Santa Cruz Avenue. Sidewalks are present to facilitate pedestrian movements between the project site and these transit stops.

Recommendations

While not required to improve Level of Service or to mitigate impacts related to traffic, it is recommended that the proposed project implement the voluntary improvements to provide the bike box on Alberto Way at the intersection with Los Gatos-Saratoga Road, as well as the detached sidewalks with a landscape buffer on Alberto Way along the project site frontage, and on the north side of Los Gatos-Saratoga Road between Alberto Way and the SR 17 northbound on-ramp.

Site Access and Circulation

Site Access

Site access was evaluated to determine the adequacy of the site driveways with regard to corner sight distance and traffic volumes. The proposed project would have one full-access driveway and one exit-only driveway on Alberto Way. The northern full-access driveway would provide access to a 7-space surface parking lot as well as the two-level below-grade parking garage. The 7-space surface parking lot would have a one-way semicircular drive aisle, connecting to the southern exit-only driveway. Queuing analysis has indicated that neither driveway would be blocked by the southbound queue at the intersection of Alberto Way and Los Gatos-Saratoga Road. Therefore, access to the project driveways would be adequate under all analyzed scenarios.

Corner Sight Distance

Sight distance requirements vary depending on the roadway speeds. The speed limit on Alberto Way is 25 mph. The Caltrans recommended stopping sight distance for this roadway is 150 feet. The site plan shows no tall landscaping or signs near either driveway that would block a driver's view. Sight distance for the southern driveway would be adequate. Alberto Way is slightly curved at the two driveway locations, but the curves do not block a driver's view 150 feet down the road. No tall landscaping or signs exist near the driveways that would obstruct a driver's view. On-street parking is currently permitted between the two driveways. The parked vehicles block a driver's view at the south exit-only driveway, thereby obstructing visibility of southbound vehicles on Alberto Way, and block a driver's view of northbound vehicles at the north full-access driveway.

Recommendations

Parking on southbound Alberto Way between the two driveways should be prohibited to ensure adequate sight distance.

On-Site Circulation

All driveway and drive-aisle widths are at least 24 feet wide, and comply with the minimum requirements established in the Town of Los Gatos Code of Ordinances Section 29.10.155. All parking stalls within the parking garage are 18 feet in length (16 feet with 2 feet overhang) and 8 feet 6 inches in width, which meet the town's requirements.

Emergency Vehicles, Truck Access and Circulation

The site plan shows that the trash pick-up area is at the northern driveway just before the ramps. Garbage trucks would exit using the south exit-only driveway via the semi-circular surface drive-aisle. All driveways and drive-aisles are at least 24 feet wide, which are adequate for emergency vehicle access and circulation.

Parking

For office use at the project site, the Town of Los Gatos Municipal Code Section 29.10.145 requires parking to be provided at the rate of 1 parking space per 250 square feet of gross floor area. The project proposes two office buildings totaling 92,800 square feet, which by code would be required to provide 372 parking spaces. The project site plan provides 395 parking spaces. Parking provision as shown on the current project site plans would meet the Town standards.

Per the California Building Code (CBC) Table 11B-6, eight (8) accessible spaces are required for parking garages with 301 to 400 parking spaces. Of the required accessible parking spaces, one van accessible space is required. As shown on the site plan, the project would provide eight (8) accessible parking spaces, of which two (2) are accessed via the southern driveway, and the remaining six (6) are located in the upper level of the below-grade garage near the elevators. The project site plan does not label which one of the eight (8) parking spaces is van accessible.

The proposed restriping of Alberto Way would eliminate on-street parking spaces on Alberto Way along the Best Western frontage. Hexagon also has recommended to prohibit parking on Alberto Way along the project building frontage for sight distance issues exiting the project site. There is approximately 70 feet of on-street parking along the Best Western frontage, and approximately 130 feet of on-street parking along the project frontage. Combined, the proposed project would eliminate approximately eight vehicle-spaces of on-street parking on Alberto Way. The five parking spaces along the project frontage could be accommodated by the project parking garage. The removed parking spaces along the Best Western frontage are assumed to be accommodated by its own parking facility.

Recommendations

The project is recommended to identify the van accessible parking space within the eight accessible parking spaces. Hexagon recommends the project prohibit parking on Alberto Way along the project frontage to enhance sight distance for exiting vehicles.

Table ES-1
Intersection Levels of Service Summary

Intersection Levels of Service Summary																					
#	Intersection	Peak Hour	Count Date	Existing		Existing + Project				Background		Background + Project				Cumulative		Cumulative + Project			
				Avg. Delay (sec)	LOS	Avg. Delay (sec)	LOS	Incr.		Avg. Delay (sec)	LOS	Avg. Delay (sec)	LOS	Incr.		Avg. Delay (sec)	LOS	Avg. Delay (sec)	LOS	Incr.	
								Delay (sec)	In Crit. V/C					Delay (sec)	In Crit. V/C					Delay (sec)	In Crit. V/C
1	N. Santa Cruz Ave & Los Gatos-Saratoga Rd *	AM	01/21/15	47.3	D	47.2	D	0.0	0.001	48.0	D	47.9	D	0.0	0.000	50.2	D	50.2	D	0.0	0.001
		PM	09/25/14	37.2	D	37.3	D	0.0	0.001	38.1	D	38.2	D	0.0	0.001	40.9	D	41.0	D	0.1	0.001
2	University Ave & Los Gatos-Saratoga Rd *	AM	01/21/15	34.5	C	34.6	C	0.0	0.000	34.8	C	34.9	C	0.0	0.000	35.1	D	35.1	D	0.0	0.001
		PM	09/25/14	30.8	C	30.6	C	0.0	0.000	30.8	C	30.7	C	0.0	0.000	31.1	C	31.0	C	0.0	0.000
3	Alberto Way & Los Gatos-Saratoga Rd	AM	05/12/15	11.2	B	13.8	B	4.3	0.062	11.2	B	13.8	B	4.3	0.063	11.2	B	13.8	B	4.3	0.062
		PM	05/12/15	12.4	B	14.9	B	2.3	0.027	12.8	B	15.1	B	2.0	0.024	12.5	B	14.7	B	2.0	0.025
4	Los Gatos Blvd & Los Gatos-Saratoga Rd	AM	05/12/15	22.8	C	23.0	C	0.2	0.006	23.2	C	23.5	C	0.2	0.007	24.2	C	24.5	C	0.3	0.007
		PM	05/12/15	24.3	C	24.6	C	0.3	0.015	25.2	C	25.5	C	0.5	0.015	26.8	C	27.3	C	0.7	0.015
5	Los Gatos Blvd & Caldwell Ave/Kennedy Rd	AM	05/12/15	37.2	D	38.6	D	2.2	0.016	38.8	D	40.5	D	2.7	0.017	44.5	D	47.1	D	4.3	0.016
		PM	05/12/15	24.4	C	24.8	C	0.8	0.016	26.3	C	26.8	C	1.0	0.016	32.5	C	33.6	C	0.5	0.016
Notes:																					
* Denotes CMP intersection																					

1.

Introduction

This report presents the results of the Transportation Impact Analysis (TIA) prepared for the proposed office development located at 401-409 Alberto Way in Los Gatos, CA. The project site is located on the northwest corner of the intersection of Los Gatos-Saratoga Road (State Route 9) and Alberto Way. Existing uses on the project site consist of 30,000 square feet of office buildings. Portions of the buildings are being used as medical offices. The project would demolish the existing buildings and replace them with a 93,500 ²square foot office complex. Access to the project site would be provided via two driveways located on Alberto Way.

Figure 1 shows the study area and project site location. Figure 2 shows the proposed site plan.

Scope of Study

This study was conducted for the purpose of identifying the potential traffic impacts related to the proposed development. The potential impacts of the project were evaluated in accordance with the standards set forth by the Town of Los Gatos and the Santa Clara County Congestion Management Program (CMP). The traffic analysis is based on the AM and PM peak hour levels of service for five (5) signalized intersections, two (2) freeway segments, and four (4) freeway ramps at the interchange of SR 17 and Los Gatos-Saratoga Road. Two of the study intersections are CMP intersections.

Study Intersections

1. N. Santa Cruz Avenue & Los Gatos-Saratoga Road (SR 9) *
2. University Avenue & Los Gatos-Saratoga Road (SR 9) *
3. Alberto Way & Los Gatos-Saratoga Road (SR 9)
4. Los Gatos Boulevard & Los Gatos-Saratoga Road (SR 9)
5. Los Gatos Boulevard & Caldwell Avenue/Kennedy Road

* Denotes CMP Intersections

Study Freeway Segments

1. SR 17, between Bear Creek Road and SR 9
2. SR 17, between SR 9 and Lark Avenue

² Since the initiation of the traffic study, the project size has been slightly reduced to 92,800 square feet. This report analyzes the project assuming its original size of 93,500 square feet. Thus, the study slightly overstates the added traffic due to the project.

Study Freeway Ramps

SR 17 & Los Gatos-Saratoga Rd Interchange

1. Northbound on-ramp from westbound Los Gatos-Saratoga Road
2. Southbound on-ramp from westbound Los Gatos-Saratoga Road
3. Northbound off-ramp to eastbound Los Gatos-Saratoga Road
4. Southbound off-ramp to eastbound Los Gatos-Saratoga Road

Traffic conditions at the study intersections were analyzed for the weekday AM and PM peak hours of adjacent street traffic. The AM peak hour of adjacent street traffic is generally between 7:00 and 9:00 AM, and the PM peak hour of adjacent street traffic is typically between 4:00 and 6:00 PM. It is during these periods on an average weekday that the most congested traffic conditions occur.

Traffic conditions were evaluated for the following scenarios:

- Scenario 1:** *Existing Conditions.* Existing traffic volumes were based on new traffic counts conducted in the year 2015, while schools were in session, the 2014 CMP count data, and previous studies.
- Scenario 2:** *Background Conditions.* Background traffic volumes were estimated by adding to existing peak hour volumes the projected volumes from approved but not yet completed developments. The added traffic from approved but not yet completed developments was provided by the Town of Los Gatos.
- Scenario 3:** *Background plus Project Conditions.* Background traffic volumes with the project were estimated by adding to background traffic volumes the traffic generated by the proposed project less the trips generated by the existing uses. Background plus project conditions were evaluated relative to background conditions in order to determine potential project impacts.
- Scenario 4:** *Existing Plus Project Conditions.* Existing traffic volumes with the project were estimated by adding to existing traffic volumes the traffic generated by the proposed project less the trips generated by the existing uses. Existing plus Project conditions were evaluated relative to existing conditions in order to determine the effects the project would have on the existing roadway network.
- Scenario 5:** *Cumulative Conditions.* Cumulative conditions include traffic growth projected to occur due to the approved development projects and other proposed but not yet approved (pending) development projects. The added traffic from pending development projects was provided by the Town of Los Gatos.
- Scenario 6:** *Cumulative plus Project Conditions.* Cumulative plus project traffic volumes were estimated by adding to cumulative traffic volumes the trips associated with the proposed project less the trips generated by the existing uses. Cumulative plus project conditions were evaluated relative to cumulative conditions in order to determine potential project impacts.

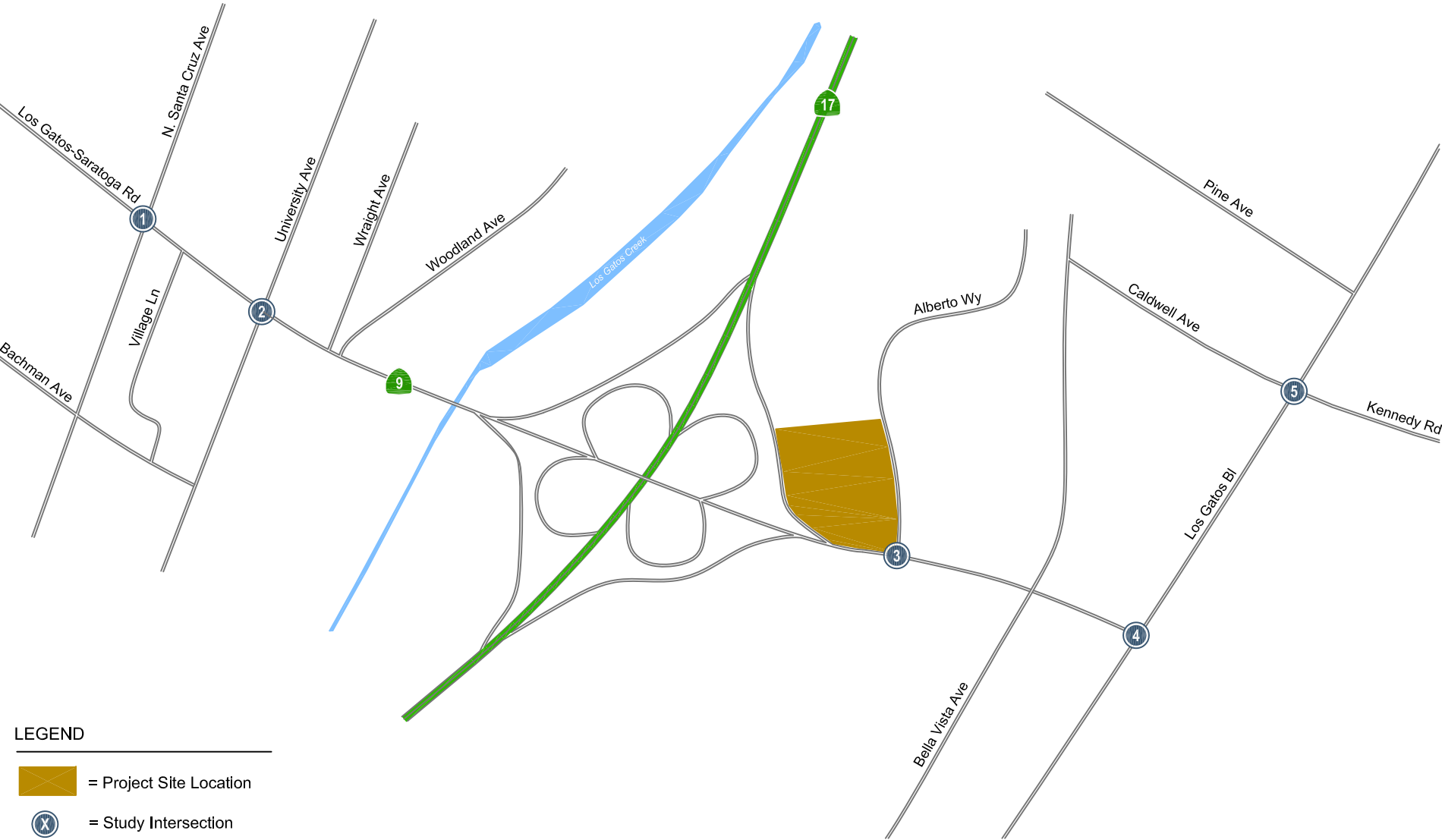


Figure 1
Site Location and Study Intersections

HIGHWAY 17 ON-RAMP

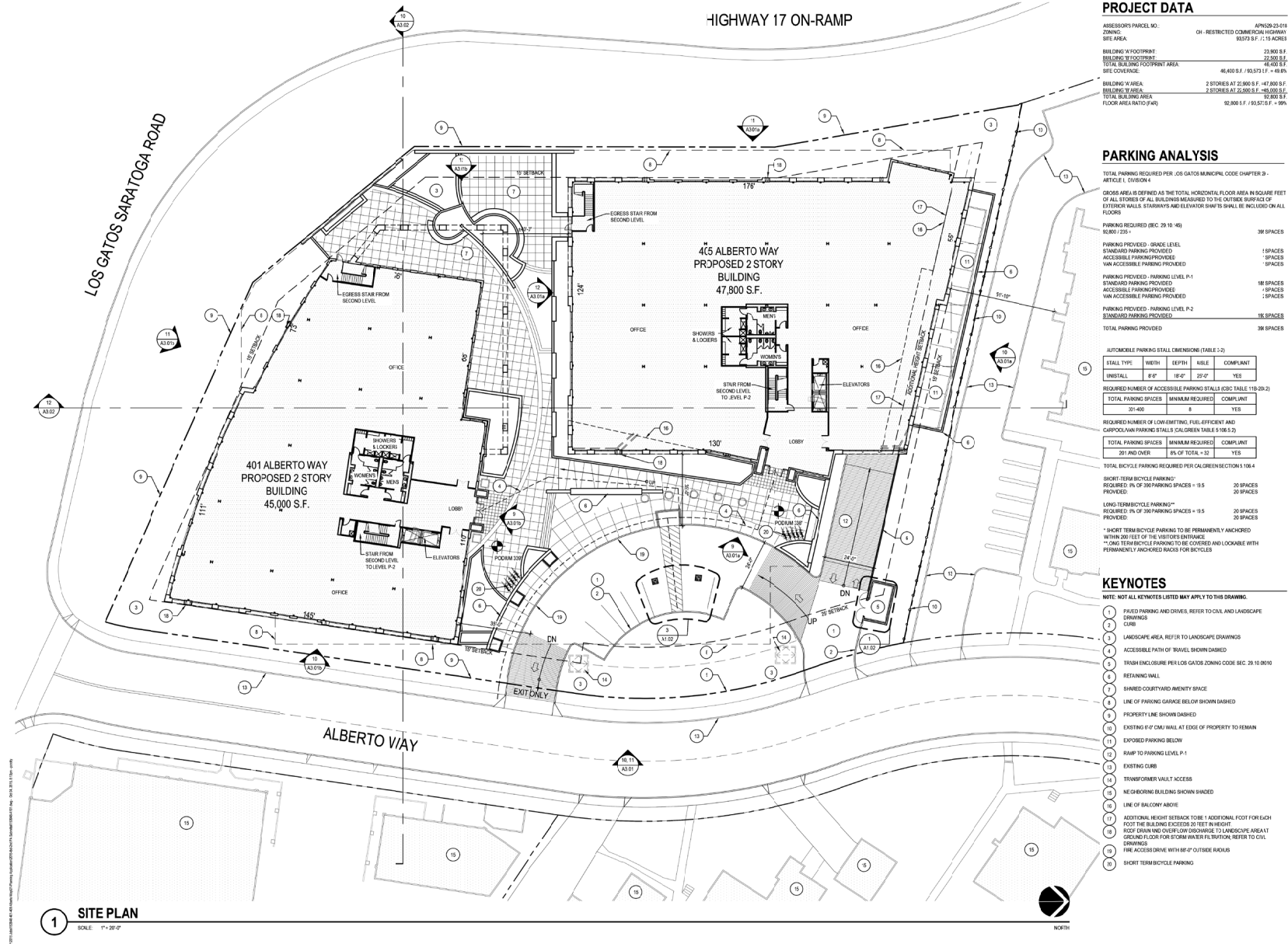


Figure 2 Project Site Plan

Methodology

This section describes the methods used to determine the traffic conditions for each scenario described above. It includes descriptions of the data requirements, the analysis methodologies, and the applicable level of service standards.

Data Requirements

The data required for the analysis were obtained from new traffic counts, the Town of Los Gatos, VTA's CMP database, and field observations. The following data were collected from these sources:

- existing traffic volumes,
- approved and pending project trips,
- intersection lane configurations, and
- signal timing and phasing.

Analysis Methodologies and Level of Service Standards

Traffic conditions at the study intersections were evaluated using level of service (LOS). *Level of Service* is a qualitative description of operating conditions ranging from LOS A, or free-flow conditions with little or no delay, to LOS F, or jammed conditions with excessive delays. The various analysis methods are described below.

Town of Los Gatos Intersections

The Town of Los Gatos level of service methodology for signalized intersections is the 2000 *Highway Capacity Manual* (HCM) method. This method is applied using the TRAFFIX software. The 2000 HCM operations method evaluates signalized intersection operations on the basis of average control delay time for all vehicles at the intersection. Since TRAFFIX is also the CMP-designated intersection level of service methodology, the Town of Los Gatos methodology employs the CMP default values for the analysis parameters. The Town of Los Gatos level of service standard for all signalized intersections is LOS D or better. The correlation between average control delay and level of service for signalized intersections is shown in Table 1.

CMP Intersections

The designated level of service methodology for the CMP also is the 2000 HCM operations method for signalized intersections, using TRAFFIX. The only difference in level of service standards is that in the Town of Los Gatos the standard is LOS D or better, and the CMP level of service standard for signalized intersections is LOS E or better. However, CMP intersections within the Town of Los Gatos are evaluated according to Town of Los Gatos standards.

Freeway Segments

Per CMP technical guidelines, a freeway segment level of service analysis is required when a project would add trips greater than one percent of a segment's capacity. Although the proposed project would add trips greater than one percent of capacity on southbound SR 17 from Lark Avenue to Los Gatos-Saratoga Road during the AM peak hour, this freeway segment is currently operating at an acceptable LOS D during the AM peak hour. The increase in segment trips would not significantly impact the freeway LOS. A simple freeway segment capacity evaluation to substantiate this determination is presented in Table 2.

Freeway Ramps

A freeway ramp analysis was performed in order to verify that the freeway ramps would have sufficient capacity to serve the expected traffic volumes with and without the project. This analysis consisted of a volume-to-capacity ratio evaluation of the freeway ramps at the study interchange. The ramp capacities were obtained from the *Highway Capacity Manual 2000*, and considered the free-flow speed and number of lanes on the ramp. The study ramps are currently not metered during either the AM or PM peak hours.

Table 1
Signalized Intersection Level of Service Definitions Based on Average Delay

Level of Service	Description	Average Control Delay Per Vehicle (sec.)
A	Signal progression is extremely favorable. Most vehicles arrive during the green phase and do not stop at all. Short cycle lengths may also contribute to the very low vehicle delay.	10.0 or less
B	Operations characterized by good signal progression and/or short cycle lengths. More vehicles stop than with LOS A, causing higher levels of average vehicle delay.	10.1 to 20.0
C	Higher delays may result from fair signal progression and/or longer cycle lengths. Individual cycle failures may begin to appear at this level. The number of vehicles stopping is significant, though may still pass through the intersection without stopping.	20.1 to 35.0
D	The influence of congestion becomes more noticeable. Longer delays may result from some combination of unfavorable signal progression, long cycle lengths, or high volume-to-capacity (V/C) ratios. Many vehicles stop and individual cycle failures are noticeable.	35.1 to 55.0
E	This is considered to be the limit of acceptable delay. These high delay values generally indicate poor signal progression, long cycle lengths, and high volume-to-capacity (V/C) ratios. Individual cycle failures occur frequently.	55.1 to 80.0
F	This level of delay is considered unacceptable by most drivers. This condition often occurs with oversaturation, that is, when arrival flow rates exceed the capacity of the intersection. Poor progression and long cycle lengths may also be major-contributing causes of such delay levels.	greater than 80.0

Source: Transportation Research Board, *2000 Highway Capacity Manual* (Washington, D.C., 2000) p10-16.

Table 2
Freeway Segment Capacity Evaluation

Freeway	Segment	Dir	Peak Hour	Existing Conditions ¹			Project Conditions		
				Mixed-Flow			Mixed-Flow		
				# of Lanes	Capacity	LOS	Project Trips ²	% Capacity	Impact
SR 17	Bear Creek Rd to Los Gatos-Saratoga Rd	NB	AM	2	4,400	F	26	0.59%	NO
			PM	2	4,400	C	0	0.00%	NO
SR 17	Los Gatos-Saratoga Rd to Lark Ave	NB	AM	2	4,400	E	4	0.09%	NO
			PM	2	4,400	C	42	0.95%	NO
SR 17	Lark Ave to Los Gatos-Saratoga Rd	SB	AM	2	4,400	D	52	1.18%	NO
			PM	2	4,400	F	0	0.00%	NO
SR 17	Los Gatos-Saratoga Rd to Bear Creek Rd	SB	AM	2	4,400	C	2	0.05%	NO
			PM	2	4,400	E	21	0.48%	NO

Notes:
1. Existing freeway conditions referenced the *Santa Clara Valley Transportation Authority Congestion Management Program Monitoring Study*, 2014.
2. Project trips are estimated via manual trip assignment.
BOLD indicates a substandard level of service.

Report Organization

This report has a total of eight chapters. Chapter 2 describes existing conditions including the existing roadway network, transit service, bicycle and pedestrian facilities. Chapter 3 presents the traffic conditions in the study area under background conditions. Chapter 4 describes the methods used to estimate the project traffic on the roadway network and presents the intersection operations under background plus project and existing plus project conditions. The cumulative conditions with and without the project are presented in Chapter 5. Chapter 6 provides an evaluation of other transportation-related issues, such as vehicle queuing, potential project impacts on bicycle, pedestrian, and transit facilities, site access, on-site circulation, and parking. Chapter 7 presents the study conclusions including a summary of any proposed mitigation measures and recommended improvements.

2. Existing Conditions

This chapter describes the existing conditions for all of the major transportation facilities in the vicinity of the project site, including the roadway network, transit service, and bicycle and pedestrian facilities. Also included are the existing levels of service of the study intersections.

Existing Roadway Network

Regional access to the project site is provided by SR 17. Local access to the project site is provided via Los Gatos-Saratoga Road (SR 9), N. Santa Cruz Avenue, University Avenue, Alberto Way, Los Gatos Boulevard and Caldwell Avenue. These facilities are described below.

SR 17 is a four-lane freeway in the vicinity of the study area. It extends south to Santa Cruz and north to I-280 in San Jose, at which point it makes a transition into I-880, which extends to Oakland. Access to the project site is provided via SR 17's interchange with Los Gatos-Saratoga Road (SR 9). The SR 17 northbound on-ramp from westbound Los Gatos-Saratoga Road forms the western boundary of the project site.

Los Gatos-Saratoga Road (SR 9) is a four lane arterial roadway adjacent to the project site. It extends from Los Gatos Boulevard in a northwesterly direction. At the town boundary of Los Gatos and Monte Sereno, it changes name to Saratoga-Los Gatos Road. Saratoga-Los Gatos Road transitions to Saratoga-Sunnyvale Road at the intersection of Big Basin Way (which is the continuation of SR 9) and Saratoga Avenue. Los Gatos-Saratoga Road has a median that begins east of the SR 17 interchange and continues to Massol Avenue. Los Gatos-Saratoga Road forms the southern boundary of the project site.

N. Santa Cruz Avenue is a two-lane roadway that runs in a north-south direction and serves as the primary commercial street in downtown Los Gatos. Santa Cruz Avenue extends from SR 17 in the south to Blossom Hill Road, where it transitions to Winchester Boulevard, which continues north as a four-lane arterial through Los Gatos, Campbell, and San Jose to its terminus in Santa Clara. Within the Los Gatos central business district, N. Santa Cruz Avenue has two lanes and on-street parking.

University Avenue is a two-lane roadway that runs parallel to N. Santa Cruz Avenue. It extends from Main Street to Lark Avenue.

Alberto Way is a two-lane roadway that runs parallel to SR 17. It extends from Los Gatos-Saratoga Road northward approximately 2,000 feet to a dead-end. Alberto Way forms the eastern boundary of the project site, and provides direct access to the project site.

Los Gatos Boulevard is a four to six-lane north-south arterial that extends from SR 85 south to Main Street. North of SR 85 and south of Loma Alta Avenue, Los Gatos Boulevard changes designation to Bascom Avenue and Main Street, respectively. Los Gatos Boulevard has four lanes between SR 85 and Lark Avenue, then widens to six lanes between Lark Avenue and Blossom Hill Road. Within the project vicinity, the roadway is two-lanes wide.

Caldwell Avenue/Kennedy Road is a two-lane residential roadway that begins at Los Gatos Boulevard and runs west to Bella-Vista Avenue. Kennedy Road begins at Los Gatos Boulevard and runs east through the hills to Shannon Road. Kennedy Road is a two-lane residential street. Caldwell Avenue and Kennedy Road form a somewhat offset intersection with Los Gatos Boulevard that is signalized.

Existing Bicycle and Pedestrian Facilities

A Class I bicycle trail, the Los Gatos Creek Trail, is located near the project site, running in a north-south direction just west of Highway 17. A Class II bikeway (defined as a striped bike lane on the street) is present on Los Gatos-Saratoga Road, extending westward from just east of the University Avenue intersection. A Class II bikeway is present on eastbound Los Gatos-Saratoga Road between the Bella Vista Avenue overpass and Los Gatos Boulevard. Bike lanes are also present on Los Gatos Boulevard within the project vicinity. Although none of the residential streets near the project site is designated as bike routes, due to their low traffic volumes, many of them are conducive to bicycle usage. Existing bicycle facilities are shown on Figure 3.

Pedestrian facilities consist mostly of sidewalks along both the commercial and residential streets in the vicinity of the project site. Crosswalks with pedestrian signal heads and push buttons are located at all of the signalized intersections in the study area, except on Los Gatos-Saratoga Road at the intersections with Alberto Way and with Los Gatos Boulevard. Crosswalks with pedestrian signal heads and push buttons are present only on the north and east legs of the Alberto Way and Los Gatos-Saratoga Road intersection, and on the west and south legs of the Los Gatos Boulevard and Los Gatos-Saratoga Road intersection. Sidewalks are on both sides of all roadways within the project vicinity, except Los Gatos-Saratoga Road between University Avenue and Los Gatos Boulevard does not have a sidewalk on the south side of the street.

Existing Transit Services

Existing transit service to the project site is provided by the Santa Clara Valley Transportation Authority (VTA). VTA provides bus service near the project area via Routes 48 and 49. Existing transit services are shown on Figure 4.

Local Route 48 operates on N. Santa Cruz Avenue, University Avenue, and Los Gatos-Saratoga Road in the study area. It runs from the Los Gatos Civic Center to the Winchester Transit Center in Campbell with 30-minute headways in the AM and PM peak hours. Route 48 operates between 6:30 AM and 8:30 PM. The closest Route 48 bus stop to the project site is located on Los Gatos-Saratoga Road west of University Avenue, approximately ½ mile west of the project site.

Local Route 49 operates on Los Gatos Boulevard in the study area. It runs from the Los Gatos Civic Center to the Winchester Transit Center in Campbell with 30-minute headways in the AM and PM peak hours. Route 49 operates between 6:30 AM and 8:40 PM. The closest bus stop is near Caldwell Avenue, about ¼ mile from the project site.

The Winchester Transit Center, the northern terminus of Route 48 and 49, is a station for VTA's light rail transit (LRT) service. The LRT line that terminates at the Winchester Transit Center provides service to downtown Mountain View, via downtown San Jose, Santa Clara, and Sunnyvale.

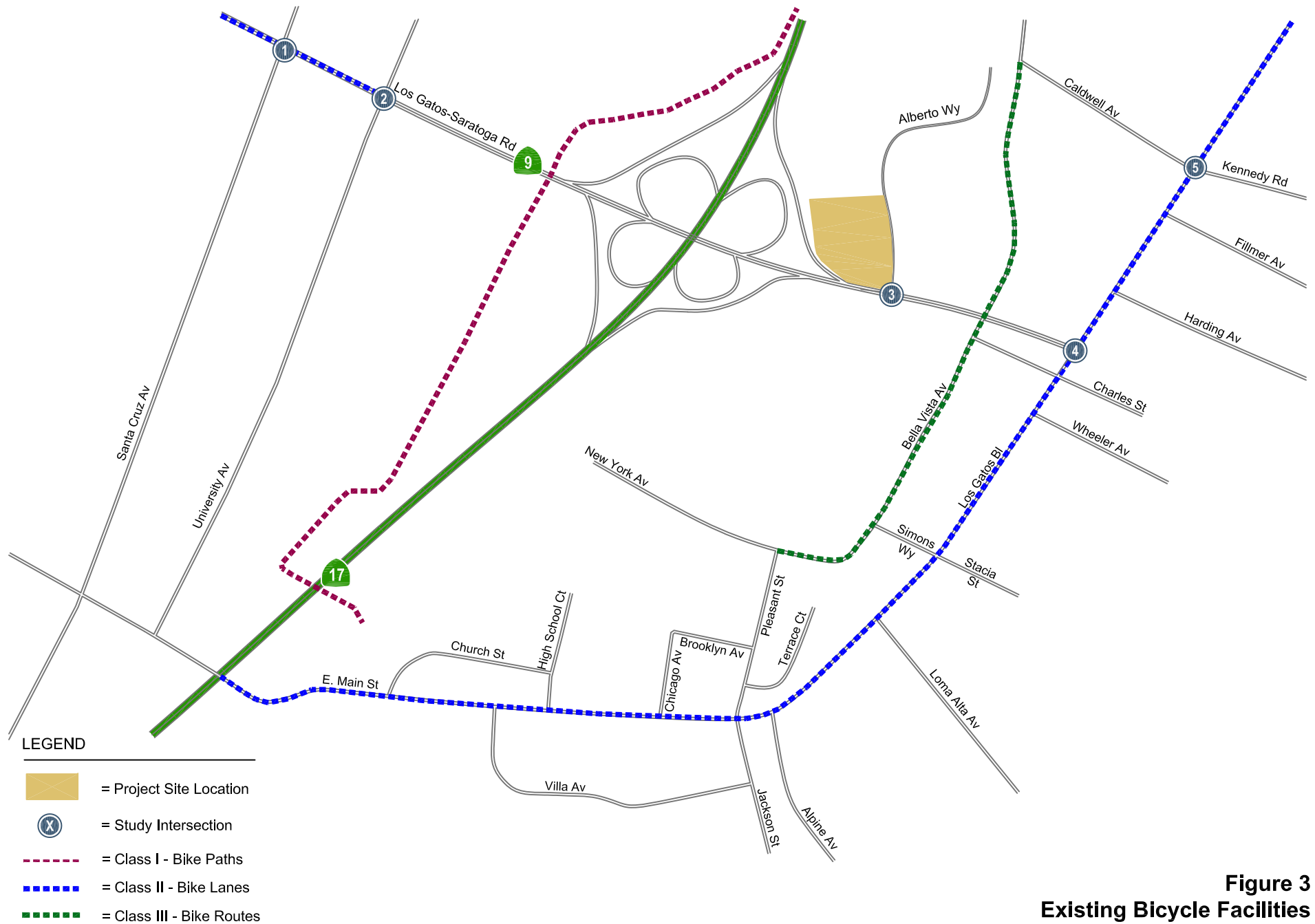


Figure 3
Existing Bicycle Facilities

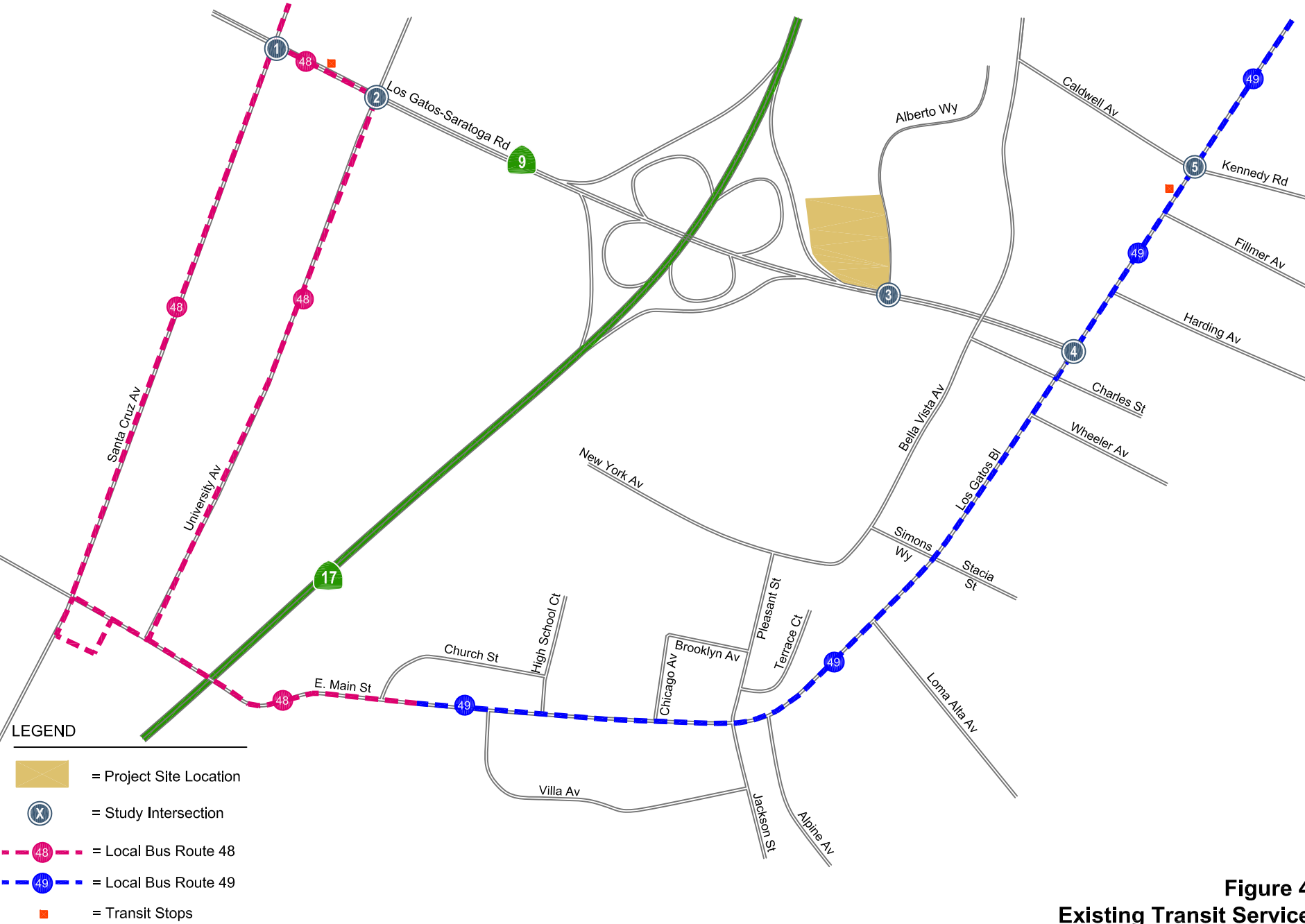


Figure 4
Existing Transit Service

Existing Intersection Lane Configurations

The existing lane configurations at the study intersections were confirmed by observations in the field and are shown on Figure 5. Recent improvements at the intersection of University Avenue and Los Gatos-Saratoga Road include the addition of a second left turn lane on the southbound approach and a separate right turn lane on the northbound approach. These improvements, plus the changes made in signal controls and phasing so that all left turns are protected, have been incorporated into the TRAFFIX analysis for this intersection.

Existing Traffic Volumes

Existing traffic volumes were obtained from new traffic counts conducted in January and May 2015, and the 2014 VTA's CMP TRAFFIX database. The existing traffic volumes at the study intersections include the traffic being generated by the existing buildings on the site.

The existing AM and PM peak hour intersection volumes are shown graphically on Figure 6. The traffic count data are included in Appendix A.

Existing Intersection Levels of Service

The results of the intersection level of service analysis show that, measured against the Town of Los Gatos and CMP level of service standards, all of the signalized study intersections currently operate at an acceptable level of service (LOS D) during both the AM and PM peak hours of traffic. The results of the intersection level of service analysis under existing conditions are summarized in Table 3.

The intersection level of service calculation sheets are included in Appendix D.

Table 3
Existing Intersection Levels of Service Summary

Study Number	Intersection	Peak Hour	Count Date	Avg. Delay (sec)	LOS
1	N. Santa Cruz Ave & Los Gatos-Saratoga Rd *	AM	1/21/2015	47.3	D
		PM	9/25/2014	37.2	D
2	University Ave & Los Gatos-Saratoga Rd *	AM	1/21/2015	34.5	C
		PM	9/25/2014	30.8	C
3	Alberto Way & Los Gatos-Saratoga Rd	AM	5/12/2015	11.2	B
		PM	5/12/2015	12.4	B
4	Los Gatos Blvd & Los Gatos-Saratoga Rd	AM	5/12/2015	22.8	C
		PM	5/12/2015	24.3	C
5	Los Gatos Blvd & Caldwell Ave/Kennedy Rd	AM	5/12/2015	37.2	D
		PM	5/12/2015	24.4	C

Notes:
* Denotes CMP intersection

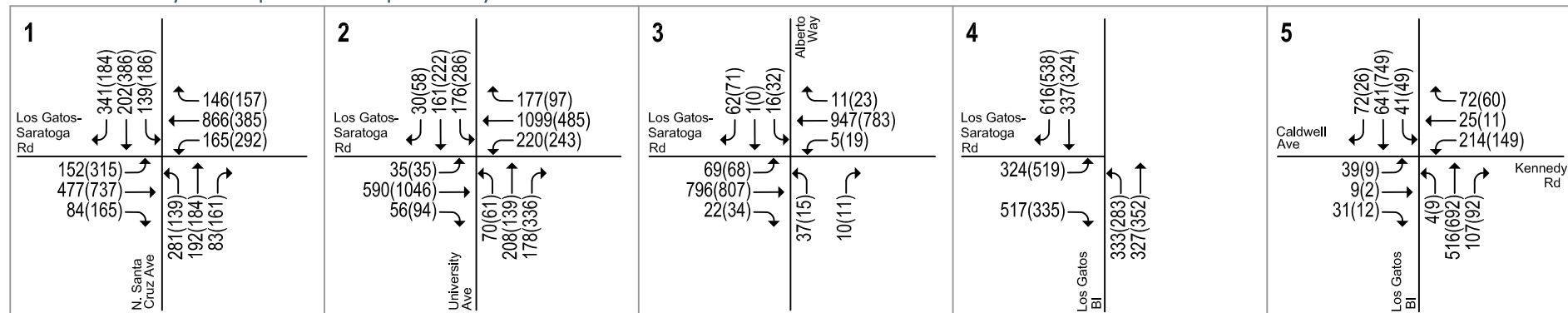
401 Alberto Way - Transportation Impact Analysis

1 Los Gatos-Saratoga Rd N. Santa Cruz Ave	 ↙ ↘ ↕ ↙ ↘ ↕	 ↙ ↘ ↕ ↙ ↘ ↕	2 Los Gatos-Saratoga Rd University Ave	 ↙ ↘ ↕ ↙ ↘ ↕	 ↙ ↘ ↕ ↙ ↘ ↕	3 Los Gatos-Saratoga Rd Alberto Way	 ↙ ↘ ↕ ↙ ↘ ↕	 ↙ ↘ ↕ ↙ ↘ ↕	4 Los Gatos-Saratoga Rd Los Gatos Bl	 ↙ ↘ ↕ ↙ ↘ ↕	 ↙ ↘ ↕ ↙ ↘ ↕	5 Caldwell Ave Kennedy Rd Los Gatos Bl	 ↙ ↘ ↕ ↙ ↘ ↕	 ↙ ↘ ↕ ↙ ↘ ↕
--	------------------------------	------------------------------	---	------------------------------	------------------------------	--	------------------------------	------------------------------	---	------------------------------	------------------------------	--	------------------------------	------------------------------



Figure 5
Existing Lane Geometry

401 Alberto Way - Transportation Impact Analysis



LEGEND

= Project Site Location

= Study Intersection

XX(XX) = AM(PM) Peak-Hour Traffic Volumes

Figure 6
Existing Traffic Volumes

Existing Freeway Ramp Capacity Analysis

This analysis consisted of a volume-to-capacity ratio evaluation of four freeway ramps at the interchange of SR 17 and Los Gatos-Saratoga Road. The ramp capacities were obtained from the *Highway Capacity Manual 2000*, which considers both the free-flow speed and the number of lanes on the study ramps. During both the AM and PM peak hours, all ramps are currently not metered. The peak-hour freeway ramp volumes were obtained from personal communication with Caltrans staff (Jordan Chan) on September 17, 2015. Table 4 shows the peak hour ramp volumes.

The ramp analysis showed that all freeway ramps currently have sufficient capacity to serve the existing traffic volumes. All study ramps have a volume-to-capacity (V/C) ratio that is well below 1.0, which means that the existing traffic demand is far lower than the ramp capacity.

Table 4
Existing Freeway Ramp Analysis

				Existing Conditions		
Interchange	Ramp	Type	Peak Hour	Capacity ¹	Volume ²	V/C
SR 17 & Los Gatos-Saratoga Rd	NB on-ramp from WB Los Gatos-Saratoga Rd	Diagonal	AM	2000	1153	0.58
			PM	2000	1017	0.51
	SB on-ramp from WB Los Gatos-Saratoga Rd	Loop	AM	1800	104	0.06
			PM	1800	379	0.21
	NB off-ramp to EB Los Gatos-Saratoga Rd	Diagonal	AM	2000	379	0.19
			PM	2000	125	0.06
	SB off-ramp to EB Los Gatos-Saratoga Rd	Loop	AM	1800	1103	0.61
			PM	1800	758	0.42
Notes:						
1. Ramp capacities were obtained from the Highway Capacity Manual 2000, and considered the free-flow speed, and the number of lanes on the ramp.						
2. Existing peak hour volumes are obtained from personal communication with Caltrans staff Jordan Chan on September 17, 2015.						

Observed Existing Traffic Conditions

Traffic conditions were observed in the field to identify existing operational deficiencies and to confirm the accuracy of calculated levels of service. The purpose of this effort was (1) to identify any existing traffic problems that may not be directly related to level of service, and (2) to identify any locations where the level of service analysis does not accurately reflect actual existing traffic conditions.

Los Gatos-Saratoga Road at N. Santa Cruz Avenue and University Avenue

At the Town's request, Hexagon performed field observations at the intersections on Los Gatos-Saratoga Road at N. Santa Cruz Avenue and at University Avenue on a regular weekday during the AM and PM peak hours once before the summer break in May, and once after the summer break in November. In general, congestion in the AM peak hour is observed in the westbound direction on Los Gatos-Saratoga Road from the SR 17 ramps to west past Santa Cruz Avenue. The congestion is mainly caused by the two lanes into one lane merging point on westbound Los Gatos-Saratoga Road west of N. Santa Cruz Avenue. Vehicles typically require two signal cycles to clear the N. Santa Cruz Avenue and University Avenue intersections. The eastbound left-turn vehicles on Los Gatos-Saratoga Road turning onto N. Santa Cruz Avenue also required two signal cycles to clear. Because of queuing issues on westbound Los Gatos-Saratoga Road, congestion is also observed on N. Santa Cruz Avenue and University Avenue in both directions. Queues on these side streets extend to the upstream intersections and require more than two signal cycles to clear. Northbound left-turn vehicles out of N. Santa Cruz Avenue and University Avenue are also observed blocking the intersection to avoid waiting an additional cycle.

During the PM peak hour, congestion is observed in the eastbound direction on Los Gatos-Saratoga Road from west of Ridgecrest Avenue to University Avenue. Vehicles typically require more than two signal cycles to clear the N. Santa Cruz Avenue and University Avenue intersections. The westbound left-turn vehicles on Los Gatos-Saratoga Road turning onto University Avenue required two signal cycles to clear. Because of the queuing issue on Los Gatos-Saratoga Road, there are instances when the southbound left-turn movements on University Avenue and on N. Santa Cruz Avenue getting onto eastbound Los Gatos-Saratoga Road also experienced lengthy delays. Other movements on University Avenue and on N. Santa Cruz Avenue are able to clear the intersection within one signal cycle.

Alberto Way and Los Gatos-Saratoga Road

During the AM peak period, heavy traffic volume was observed only on the eastbound leg of Los Gatos-Saratoga Road. There was spillback from the downstream intersection on Los Gatos-Saratoga Road at Los Gatos Boulevard. As a result, the inner eastbound through lane on Los Gatos-Saratoga Road queues to the SR 17 southbound on-ramp, and the outer eastbound through lane on Los Gatos-Saratoga Road queues onto the SR 17 northbound off-ramp. Because of the spillback issue from Los Gatos Boulevard, the eastbound through movement on Los Gatos-Saratoga Road requires several signal cycles to clear the queue.

During the PM peak period, the westbound through movement on Los Gatos-Saratoga Road receives moderate queues that extend toward the location of the Bella Vista Avenue overpass, but all clear within one signal cycle. No other operational issues were observed.

Los Gatos Boulevard and Los Gatos-Saratoga Road

During the AM peak period, heavy traffic volume was observed on the eastbound leg of Los Gatos-Saratoga Road. The eastbound left-turn lane on Los Gatos-Saratoga Road feeds onto northbound Los Gatos Boulevard, but because of spillback issues at the downstream intersection at Caldwell Avenue, the eastbound left-turn lane on Los Gatos-Saratoga Road requires 3 cycles to clear. The right-turn lane on Los Gatos-Saratoga Road is queued only to the location of the Bella Vista Avenue overpass, and clears within one signal cycle. No significant issues were observed on other movements.

During the PM peak period, heavy traffic volumes were observed on the southbound through movement on Los Gatos Boulevard and eastbound left-turn movement on Los Gatos-Saratoga Road. Both movements required two signal cycles to clear. No other operational issues were observed.

Los Gatos Boulevard and Caldwell Avenue/Kennedy Road

During the AM peak period, a crossing guard is present on the west and south crosswalks. There are heavy pedestrian (school children) movements on the west and south crosswalks. The northbound through movement on Los Gatos Boulevard constantly queues towards Los Gatos-Saratoga Road, and causes significant delays on the eastbound movement on Los Gatos-Saratoga Road. The southbound through movement on Los Gatos Boulevard constantly queues towards Nino Avenue, but all vehicles clear within one signal cycle. The westbound left-turn movement on Kennedy Road is consistently queued and requires two to three cycles to clear. Right turns on red are prohibited for the northbound, eastbound, and westbound movements, but few vehicles obeyed the signs. There were no significant issues observed during the PM peak period.

This study recognizes that during both the AM and PM peak period, several study intersections have specific movements that require multiple cycles to clear. However, vehicles on other movements at these intersections do not experience delays longer than one signal cycle. The level of service definition and methodology represents an average of all movements at an intersection. Thus, if one movement is congested, but the other movements do not experience lengthy delays, the average level of service can be acceptable.

Existing Traffic Conditions on Alberto Way

Alberto Way is an approximately 34-foot wide road that dead-ends to the north. There are five on-street parking spaces along the project frontage and another three spaces across the street in front of the Best Western hotel.

Hexagon conducted intersection counts at the intersection of Alberto Way and Los Gatos Saratoga Road in May 2015. Alberto Way carried 65 inbound trips and 79 outbound trips during the AM peak hour, and 83 inbound trips and 103 outbound trips during the PM peak hour. The existing buildings on the study project site generated 29 inbound and 13 outbound trips during the AM peak hour, and 34 inbound and 47 outbound trips during the PM peak hour, which represents approximately 30% of all traffic during the AM peak hour, and 45% of all traffic during the PM peak hour on Alberto Way. Existing peak hour traffic volume on Alberto Way is relatively low, with an average of one to two vehicles on the road per minute. After the initial 500 feet of the road, where all traffic associated with the study project site have turned off the road, peak hour traffic volume on Alberto Way is reduced to approximately one vehicle per minute.

3.

Background Conditions

This chapter presents background traffic conditions, which are defined as conditions just prior to completion of the proposed project. Traffic volumes for background conditions comprise volumes from existing traffic counts plus traffic generated by other approved developments in the vicinity of the site. This chapter describes the procedure used to determine background traffic volumes and the resulting traffic conditions. The background scenario predicts a realistic traffic condition that would occur as approved development projects are built and occupied.

Background Transportation Network

It was assumed in this analysis that the transportation network under background conditions would be the same as the existing network.

Background Traffic Volumes

Approved developments are those developments that have been approved by local agencies, are under construction, or are built but not yet occupied. The approved project list was obtained from the Town of Los Gatos and is included in Appendix B. Based on a review of traffic studies prepared for these projects, a recent TRAFFIX file provided by the Town of Los Gatos, the types and sizes of these developments, and their distances from the project site, the following approved developments are expected to add traffic to at least one of the study intersections during at least one of the peak hour periods:

1. Albright Way: Replace 250,000 s.f. of office with 485,000 s.f. of office
2. Bentley Silicon Valley Auto Dealer: expansion from 26,085 s.f. to 31,909 s.f.
3. 550 Hubbell Way: 4 single-family homes
4. 375 Knowles Drive: 33 single-family homes
5. 16005 Los Gatos Blvd: Demolish auto dealer and construct residential/commercial mixed-use
6. 55 Los Gatos-Saratoga Road: Demolish 3 hotel rooms and add commercial mixed-use
7. Placer Oaks Road: 9-unit residential subdivision
8. 2585 Samaritan Drive (Stanford Cancer Center): Construct 74,800 s.f. additional medical office
9. Highlands of Los Gatos: Residential subdivision
10. 135 Riviera Drive: 50 additional units at Riviera Terrace Apartments
11. Lunardi's Supermarket: 6,204 s.f. expansion
12. North 40 Specific Plan: 270 residential units, 250,000 s.f. office/hotel, and 400,000 s.f. of retail

Background peak hour traffic volumes were calculated by adding to existing volumes the estimated traffic from the approved developments. Vehicle trips from each of the approved projects were obtained from the TRAFFIX file provided by the Town of Los Gatos or from the project's traffic impact study. The estimated trips were assigned to the study intersections according to the distributions and assignments identified in the Town's TRAFFIX file or the relevant traffic studies.

Background traffic volumes are shown graphically on Figure 7.

401 Alberto Way - Transportation Impact Analysis

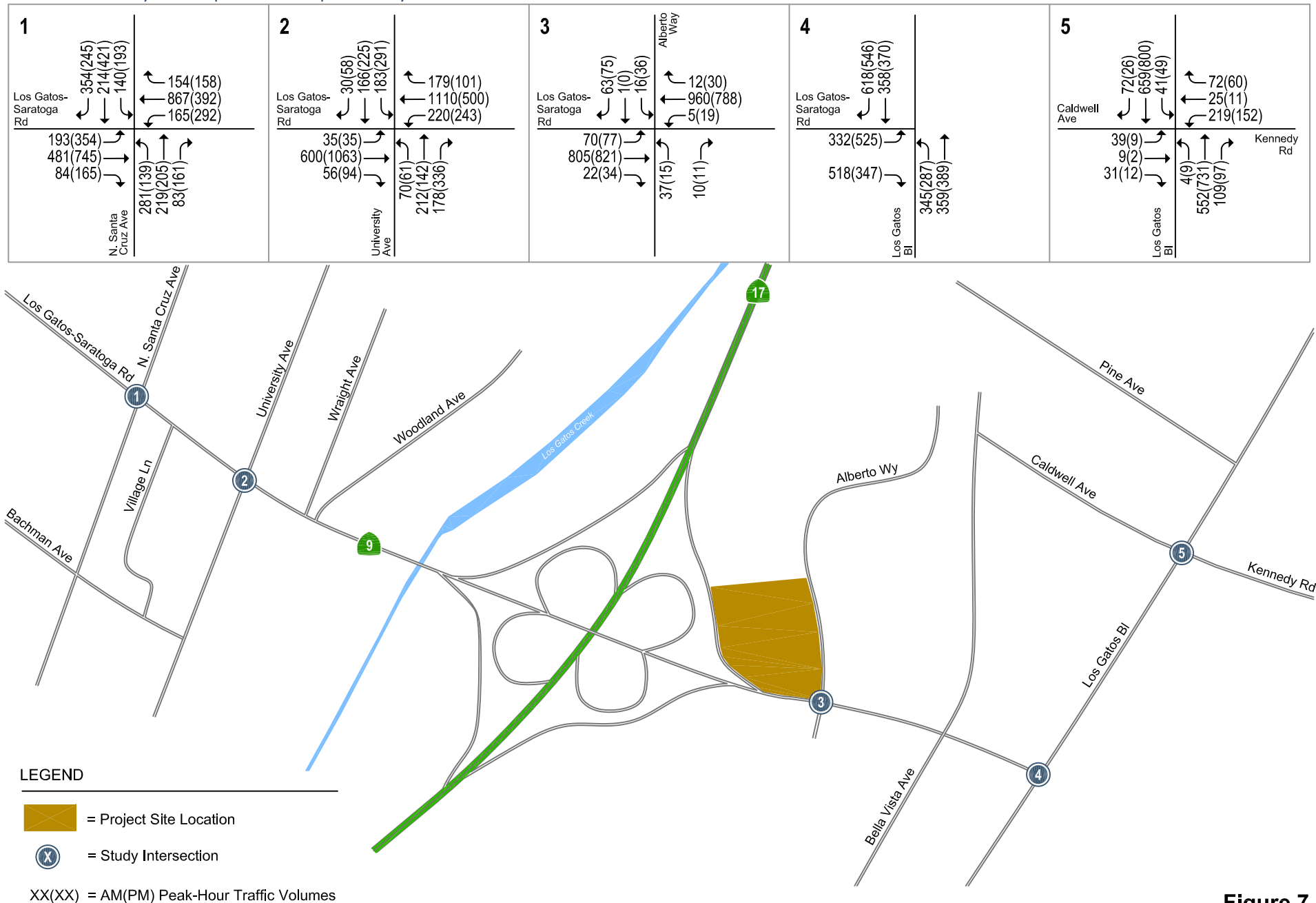


Figure 7
Background Traffic Volumes

Intersection Levels of Service under Background Conditions

The results of the intersection level of service analysis under background conditions are shown in Table 5. The results show that, measured against the Town of Los Gatos and CMP level of service standards, all of the study intersections would operate at an acceptable level of service (LOS D) during both the AM and PM peak hours of traffic under background conditions.

Table 5
Background Intersection Levels of Service Summary

Study Number	Intersection	Peak Hour	Existing		Background	
			Avg. Delay (sec)	LOS	Avg. Delay (sec)	LOS
1	N. Santa Cruz Ave & Los Gatos-Saratoga Rd *	AM	47.3	D	48.0	D
		PM	37.2	D	38.1	D
2	University Ave & Los Gatos-Saratoga Rd *	AM	34.5	C	34.8	C
		PM	30.8	C	30.8	C
3	Alberto Way & Los Gatos-Saratoga Rd	AM	11.2	B	11.2	B
		PM	12.4	B	12.8	B
4	Los Gatos Blvd & Los Gatos-Saratoga Rd	AM	22.8	C	23.2	C
		PM	24.3	C	25.2	C
5	Los Gatos Blvd & Caldwell Ave/Kennedy Rd	AM	37.2	D	38.8	D
		PM	24.4	C	26.3	C
Notes:						
* Denotes CMP intersection						

4. Project Conditions

This chapter describes the roadway traffic operations under existing plus project conditions and background plus project conditions, the method by which project traffic is estimated, and any impacts caused by the project. The background plus project scenario is analyzed according to the VTA's CMP guidelines. The existing plus project scenario is presented for information purposes only. Existing plus project traffic conditions could potentially occur if the project were to be occupied prior to the other approved projects in the area. However, it is unlikely that this traffic condition would occur, since some of the other approved projects expected to add traffic to the study area would likely be built and occupied during the time this project is going through the development review process.

Significant Impact Criteria

Significance criteria are used to establish what constitutes an impact. Impacts on intersections are based on the significance criteria and level of service standards of the jurisdiction in which the intersection is located. For this analysis, significance criteria for impacts on intersections are based on the Town of Los Gatos level of service standard. As noted above, LOS D is an acceptable level of traffic operation at signalized intersections in Los Gatos.

A project is said to create a significant adverse impact on traffic conditions at an intersection if, for either peak hour, either of the following conditions occurs:

1. The addition of project traffic causes an intersection operating at LOS A, B, or C under no-project conditions to degrade more than one letter grade under with-project conditions, or
2. The level of service at an intersection is LOS D or worse under no-project conditions and the addition of project traffic causes a degradation of level of service to LOS E or F.

The project shall mitigate any intersection project impact so that the level of service will remain at an acceptable level (LOS D).

As noted above, the CMP standard for an acceptable level of service is LOS E or better. The CMP definition of a significant impact states that a project is said to create significant adverse impact on traffic conditions at a CMP-designated signalized intersection if for either peak hour:

1. The level of service at the intersection degrades from an acceptable LOS E or better under background conditions to an unacceptable LOS F under project conditions, or
2. The level of service at the intersection is an unacceptable LOS F under background conditions and the addition of project trips causes both the critical-movement delay at the intersection to increase by four (4) or more seconds *and* the volume-to-capacity ratio (V/C) to increase by one percent (.01) or more.

An exception to this rule applies when the addition of project traffic reduces the amount of average delay for critical movements (i.e., the change in average delay for critical movements is negative). In this case, the threshold of significance is an increase in the critical V/C value by .01 or more.

A significant impact by CMP standards is said to be satisfactorily mitigated when measures are implemented that would restore intersection level of service to background conditions or better.

Project Description

The project site is located at 401-409 Alberto Way in Los Gatos, CA, on the northwest corner of the intersection of Los Gatos-Saratoga Road (State Route 9) and Alberto Way. Existing uses on the project site consist of 30,000 square feet of office buildings. A portion of the buildings is occupied for medical office uses. The project would demolish the existing buildings and replace them with a 93,500 square foot office complex. Access to the project site would be provided via two driveways located on Alberto Way.

Project Trip Estimates

The magnitude of traffic produced by a new development and the locations where that traffic would appear are estimated using a three-step process: (1) trip generation, (2) trip distribution, and (3) trip assignment. In determining project trip generation, the magnitude of traffic entering and exiting the site is estimated for the AM and PM peak hours. As part of the project trip distribution, an estimate is made of the directions to and from which the project trips would travel. In the project trip assignment, the project trips are assigned to specific streets and intersections. These procedures are described below.

Trip Generation

Daily and peak-hour trip generation estimates for the proposed project are based on trip rates published in the ITE *Trip Generation Manual, 9th Edition* for a general office building. The proposed new buildings are expected to generate 181 trips (159 in and 22 out) during the AM peak hour and 183 trips (31 in and 152 out) during the PM peak hour.

The existing buildings on the site are partially occupied and are generating traffic. Therefore, the traffic generated by the project will not be entirely new trips. Hexagon counted the site driveways to determine the number of trips currently being generated. The current trip generation is 42 trips during the AM peak hour and 81 trips during the PM peak hour. The difference between the project trips and the existing trips were added to the road network under both background plus project and existing plus project conditions. This equates to 139 net new trips during the AM peak hour and 102 net new trips during the PM peak hour. The trip generation estimates are shown on Table 6.

Table 6
Trip Generation Summary

Land Use	Size	Unit	Daily Rate	Daily Trips	AM Peak Hour				PM Peak Hour			
					Rate	In	Out	Total	Rate	In	Out	Total
Proposed Project												
Office ¹	93.5	ksf	11.03	1,031	1.94	159	22	181	1.96	31	152	183
Existing Site Driveway Counts ²												
Office	30.0	ksf	11.03	(331)		(29)	(13)	(42)		(34)	(47)	(81)
Project Trips net Driveway Counts				700		130	9	139		(3)	105	102
Notes:												
All rates are from: Institute of Transportation Engineers, <i>Trip Generation, 9th Edition</i>												
1. Land Use Code 710: General Office Building (averag rates for daily trips, fitted curve equation for peak hour trips, expressed in trips per 1,000 s.f.)												
2. Existing site driveway counts are based on driveway counts conducted on May 5, 2015 during both the AM (7-9 AM) and PM (4-6 PM) peak hours of commute traffic. Daily trips are estimated for existing office use using the daily trip generation rate for General Office Building (average rates, expressed in trips per 1,000 s.f.)												

The buildings at the project site are currently partially occupied. The buildings have been fully occupied in the past. Therefore, project trip generation could also credit the trips generated by the project site assuming full occupancy. Using the ITE trip rates, the existing buildings on the project site at the entitled full occupancy are estimated to generate 47 trips (41 in and 6 out) during the AM peak hour and 45 trips (8 in and 37 out) during the PM peak hour. The net increase in project trips would be 134 trips during the AM peak hour and 138 trips during the PM peak hour. Trip generation assuming full occupancy is shown on Table 7. These estimates are shown for informational purposes only. The traffic study is based on crediting the existing driveway counts.

Table 7
Trip Generation Assuming Full Occupancy

Land Use	Size	Unit	Daily Rate	Daily Trips	AM Peak Hour				PM Peak Hour			
					Rate	In	Out	Total	Rate	In	Out	Total
Proposed Project												
Office ¹	93.5	ksf	11.03	1,031	1.94	159	22	181	1.96	31	152	183
Existing Entitlement ²												
Office	30.0	ksf	11.03	(331)	1.56	(41)	(6)	(47)	1.49	(8)	(37)	(45)
Project Trips net Existing Entitlement				700		118	16	134		23	115	138
Notes:												
All rates are from: Institute of Transportation Engineers, <i>Trip Generation, 9th Edition</i>												
1. Land Use Code 710: General Office Building (averag rates for daily trips, fitted curve equation for peak hour trips, expressed in trips per 1,000 s.f.)												
2. Trips associated with the existing entitlement at the project site are estimated using the trip generation rates for General Office Building (average rates).												

Trip Distribution and Assignment

The trip distribution pattern for the proposed project was estimated based on existing travel patterns on the surrounding roadway system, and the locations of complementary land uses. The project trip distribution pattern is shown on Figure 8.

The project trips were assigned to the roadway network based on the directions of approach and departure, the roadway network connections, and the location of project driveways.

Figure 9 presents the net project trips at each study intersection.

Intersection Traffic Volumes

Project impacts were evaluated relative to both (1) background traffic volumes and (2) existing traffic volumes. For the background plus project scenario, the net new trips generated by the project were added to the background traffic volumes (described in Chapter 3) to derive the background plus project traffic volumes. Figure 10 shows the intersection turning-movement volumes under background plus project conditions. For the existing plus project scenario, the net new trips generated by the project were added to the existing traffic volumes (described in Chapter 2) to derive the existing plus project traffic volumes. Figure 11 shows the intersection turning-movement volumes under existing plus project conditions.

Transportation Network

This analysis assumes that the transportation network under project conditions would be the same as under existing and background conditions, except at the intersection of Alberto Way and Los Gatos-Saratoga Road, where the project proposes restriping Alberto Way to include a dedicated right-turn lane and a shared left-through lane. Parking spaces on Alberto Way along the Best Western Inn frontage would be removed under the proposed restriping of Alberto Way. Detached sidewalks with a landscape buffer would be provided on Alberto Way along the project frontage, as well as on the north side of Los Gatos-Saratoga Road between Alberto Way and SR 17. The project also proposes off-site improvements to the eastbound left-turn lane on Los Gatos-Saratoga Road at Alberto Way, upgrading the signal at this intersection, as well as interconnecting this signal to the signal on Los Gatos-Saratoga Road at Los Gatos Boulevard. At the time of this report, improvement options are being considered. The proposed intersection off-site improvements at Alberto Way and Los Gatos-Saratoga Road are shown on Figure 12.

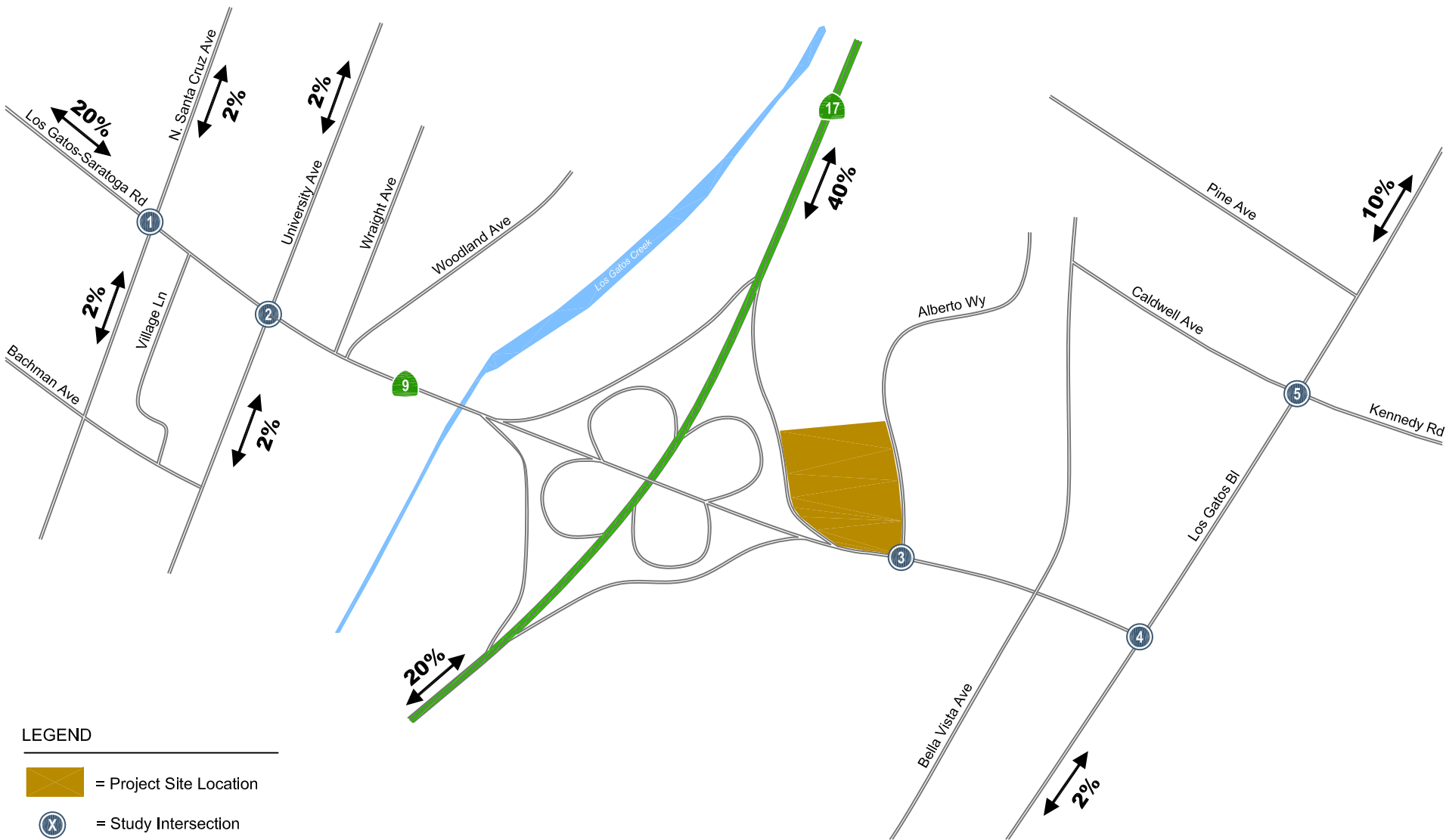


Figure 8
Trip Distribution Pattern

401 Alberto Way - Transportation Impact Analysis

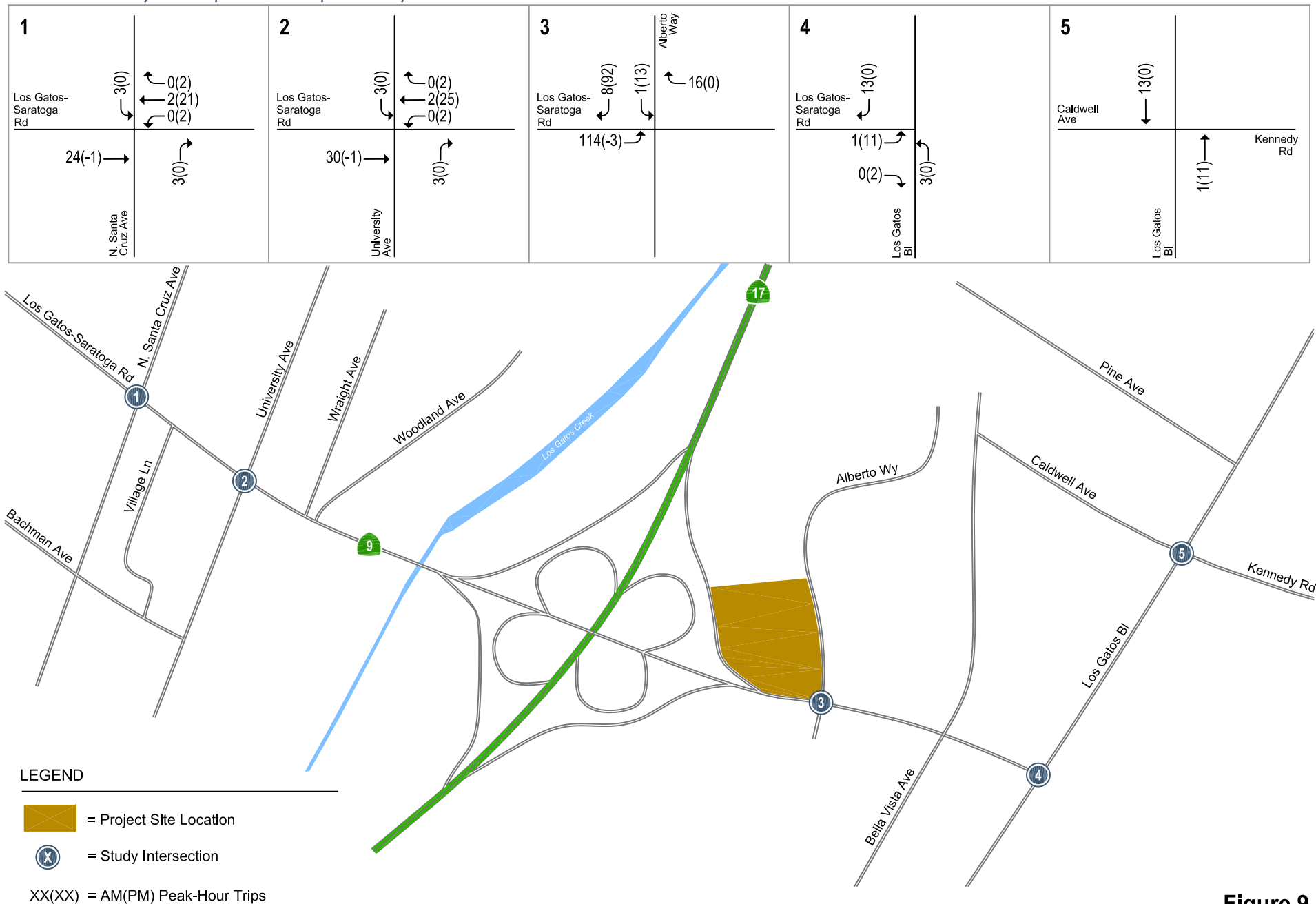


Figure 9
Net Project Trip Assignment

401 Alberto Way - Transportation Impact Analysis

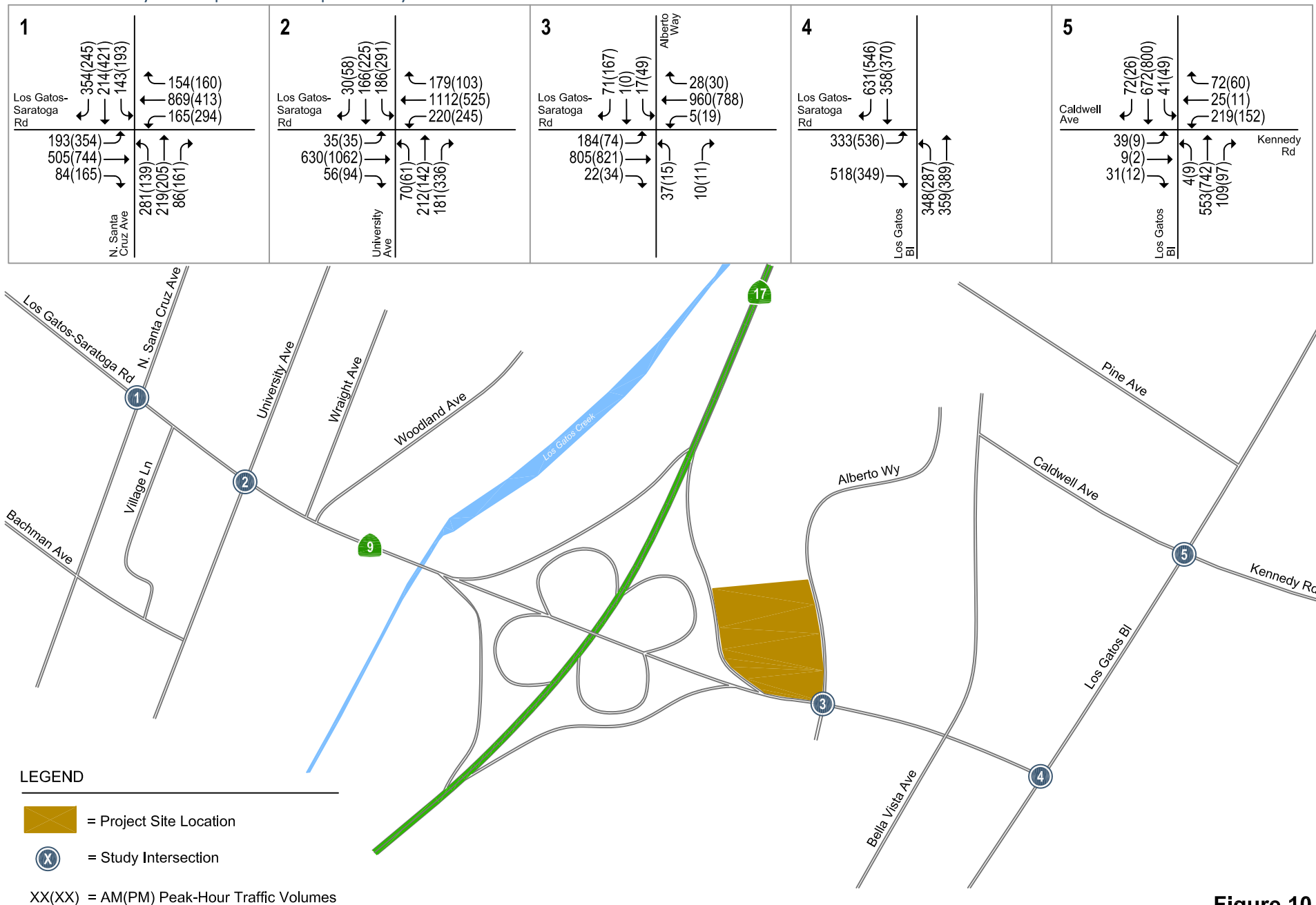


Figure 10
Background Plus Project Traffic Volumes

401 Alberto Way - Transportation Impact Analysis

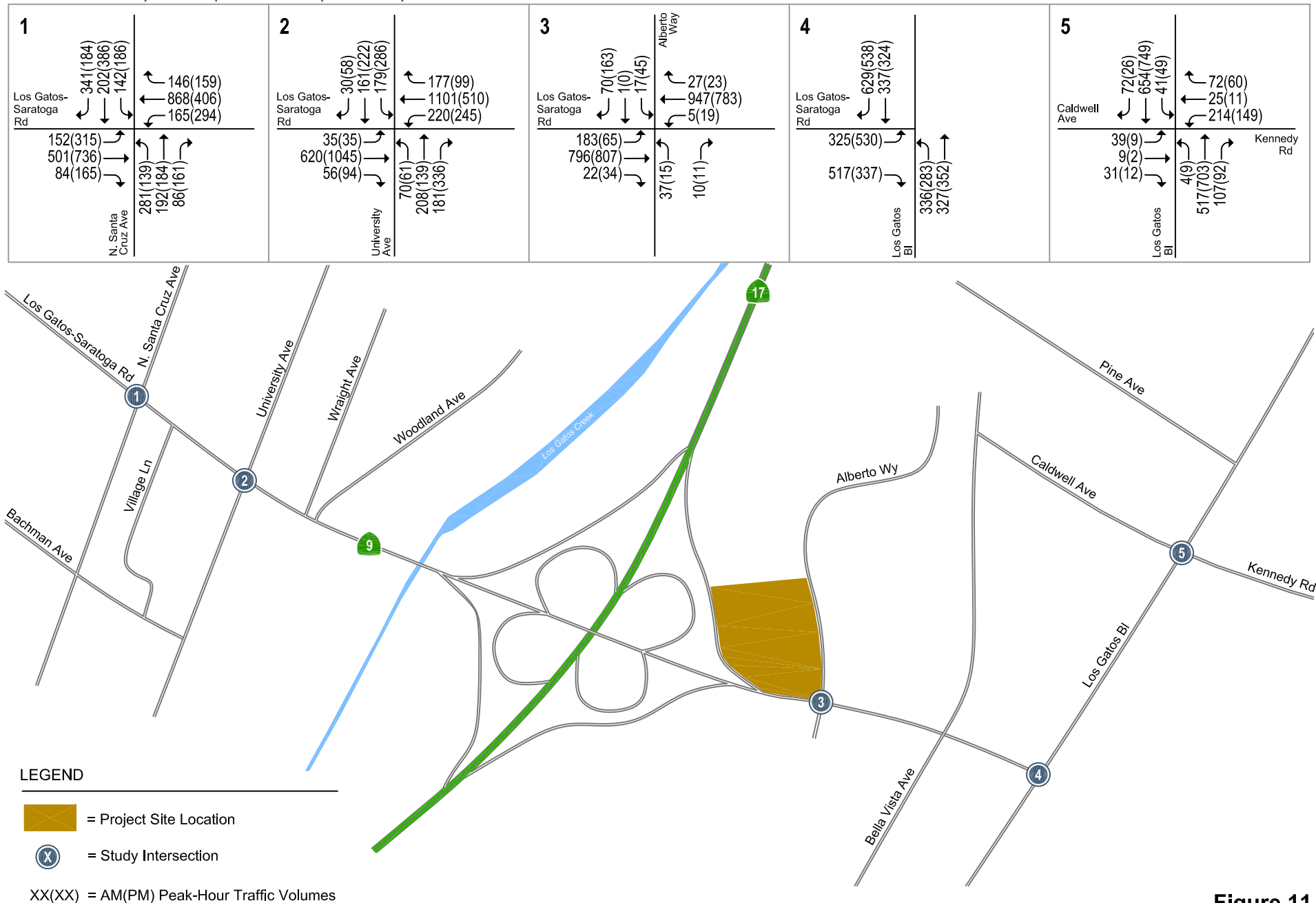
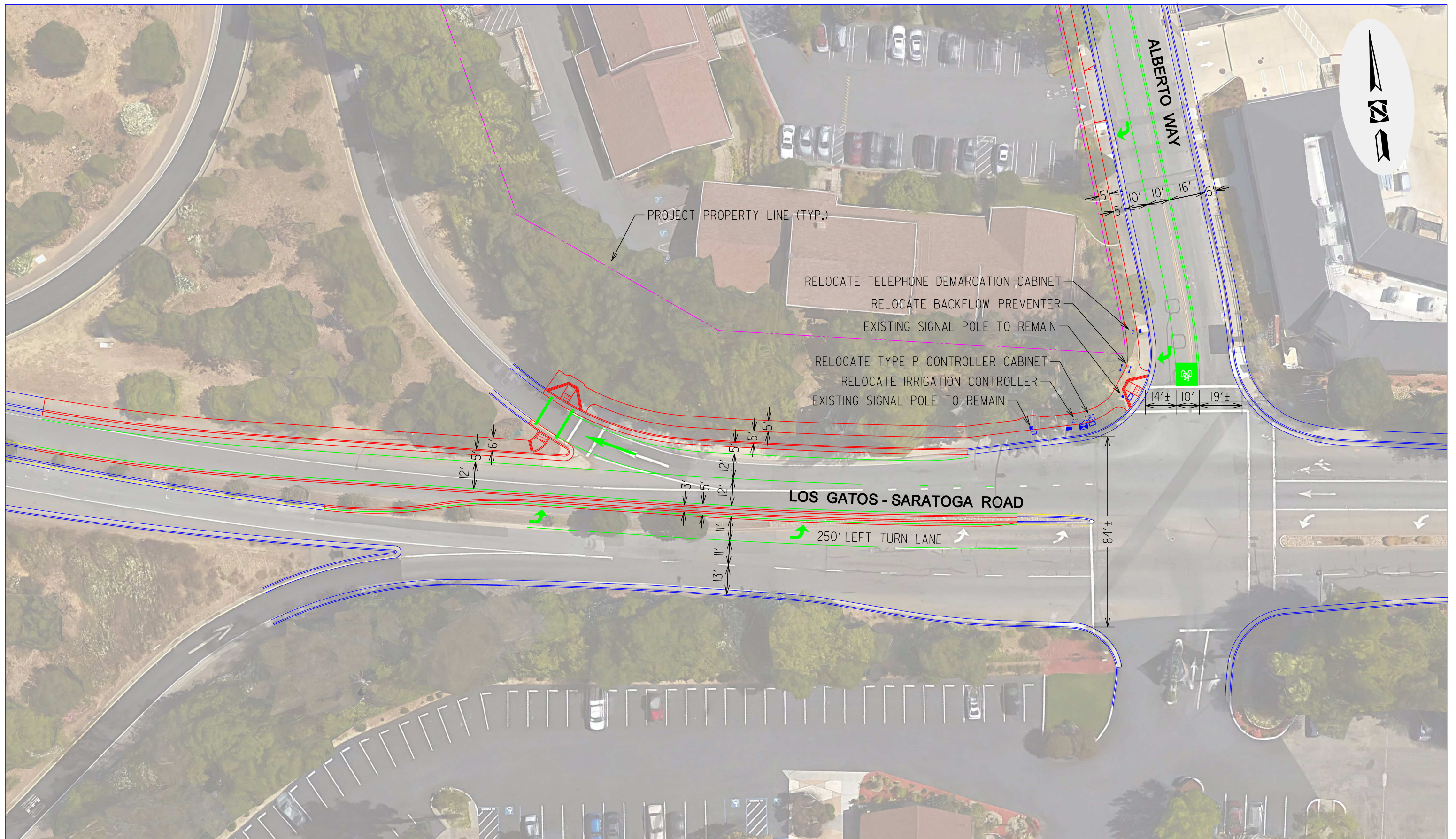


Figure 11
Existing Plus Project Traffic Volumes



Background plus Project Conditions Intersection Levels of Service

The results of the intersection level of service analysis under background plus project conditions show that, measured against the Town of Los Gatos and CMP level of service standards, all of the signalized study intersections would operate at an acceptable level of service (LOS D) during both the AM and PM peak hours of traffic (see Table 8) under background plus project conditions.

At the intersection of Alberto Way and Los Gatos-Saratoga Road, the level of service presented in Table 8 assumes the proposed improvement to restripe Alberto Way to include a dedicated right-turn lane and a shared left-through lane. When analyzed without the proposed improvement on Alberto Way, this intersection would continue to operate at LOS B during both the AM and PM peak hours with minimal changes to critical delay and critical V/C.

As discussed in Chapter 2, field observations indicate that the intersections on Los Gatos-Saratoga Road at Santa Cruz Avenue and at University Avenue experience longer queues and delays on certain movements than the LOS calculations indicate. This is because the LOS is an average of all movements, some of which operate acceptably. The added project traffic at these two intersections would not cause significant intersection impacts because the increase in critical volume-to-capacity (V/C) ratio would be less than 0.01 and the increase the average critical movement delay would be less than 4 seconds. The traffic added at these intersections would also be going in the off-peak direction.

The Town of Los Gatos has also identified intersection improvements at these two intersections that would be funded by the Town's Traffic Impact Fee.

Therefore, none of the intersections would be significantly impacted by the project.

Table 8
Background plus Project Intersection Levels of Service Summary

Study Number	Intersection	Peak Hour	Background		Background + Project			
			Avg. Delay (sec)	LOS	Avg. Delay (sec)	LOS	Incr. In Crit. Delay (sec)	Incr. In Crit. V/C
1	N. Santa Cruz Ave & Los Gatos-Saratoga Rd *	AM	48.0	D	47.9	D	0.0	0.000
		PM	38.1	D	38.2	D	0.0	0.001
2	University Ave & Los Gatos-Saratoga Rd *	AM	34.8	C	34.9	C	0.2	0.001
		PM	30.8	C	30.7	C	0.1	0.001
3	Alberto Way & Los Gatos-Saratoga Rd	AM	11.2	B	14.4	B	5.4	0.072
		PM	12.8	B	15.7	B	2.9	0.036
4	Los Gatos Blvd & Los Gatos-Saratoga Rd	AM	23.2	C	23.3	C	0.1	0.002
		PM	25.2	C	25.4	C	0.2	0.007
5	Los Gatos Blvd & Caldwell Ave/Kennedy Rd	AM	38.8	D	39.6	D	1.2	0.009
		PM	26.3	C	26.5	C	0.5	0.007

Notes:
* Denotes CMP intersection

Existing Plus Project Intersection Levels of Service

The results of the intersection level of service analysis under existing plus project conditions are summarized in Table 9. The results of the analysis show that all study intersections would continue to operate at acceptable levels (LOS D or better) during both the AM and PM peak hours under existing plus project conditions.

At the intersection of Alberto Way and Los Gatos-Saratoga Road, the level of service presented in Table 9 assumes the proposed improvement to restripe Alberto Way to include a dedicated right-turn lane and a shared left-through lane. When analyzed without the proposed improvement on Alberto Way, this intersection would continue to operate at LOS B during both the AM and PM peak hours with minimal changes to critical delay and critical V/C.

Table 9
Existing plus Project Intersection Levels of Service Summary

Study Number	Intersection	Peak Hour	Existing		Existing + Project			
			Avg. Delay (sec)	LOS	Avg. Delay (sec)	LOS	Incr. In Crit. Delay (sec)	Incr. In Crit. V/C
1	N. Santa Cruz Ave & Los Gatos-Saratoga Rd *	AM	47.3	D	47.2	D	0.0	0.001
		PM	37.2	D	37.3	D	0.0	0.001
2	University Ave & Los Gatos-Saratoga Rd *	AM	34.5	C	34.6	C	0.1	0.001
		PM	30.8	C	30.7	C	0.1	0.001
3	Alberto Way & Los Gatos-Saratoga Rd	AM	11.2	B	14.5	B	5.4	0.071
		PM	12.4	B	15.5	B	3.2	0.038
4	Los Gatos Blvd & Los Gatos-Saratoga Rd	AM	22.8	C	22.9	C	0.1	0.002
		PM	24.3	C	24.4	C	0.1	0.007
5	Los Gatos Blvd & Caldwell Ave/Kennedy Rd	AM	37.2	D	37.9	D	1.0	0.008
		PM	24.4	C	24.6	C	0.3	0.007

Notes:
* Denotes CMP intersection

Project Conditions Freeway Ramp Analysis

Freeway ramp volumes under existing plus project conditions were estimated by adding project trips to the existing volumes obtained from Caltrans. Table 10 shows the peak hour ramp volumes under existing plus project conditions.

The ramp analysis under existing plus project conditions shows that the selected ramps would continue to have sufficient capacity to serve the projected traffic volumes under existing plus project conditions. Therefore, the project impact on freeway ramps would be less than significant.

Table 10
Existing plus Project Freeway Ramp Analysis

Interchange	Ramp	Type	Peak Hour	Capacity ¹	Existing Conditions		Existing + Project Conditions		
					Volume ²	V/C	Project Trips	Volume	V/C
SR 17 & Los Gatos-Saratoga Rd	NB on-ramp from WB Los Gatos-Saratoga Rd	Diagonal	AM	2000	1153	0.58	4	1157	0.58
			PM	2000	1017	0.51	42	1059	0.53
	SB on-ramp from WB Los Gatos-Saratoga Rd	Loop	AM	1800	104	0.06	2	106	0.06
			PM	1800	379	0.21	21	400	0.22
	NB off-ramp to EB Los Gatos-Saratoga Rd	Diagonal	AM	2000	379	0.19	26	405	0.2
			PM	2000	125	0.06	0	125	0.06
	SB off-ramp to EB Los Gatos-Saratoga Rd	Loop	AM	1800	1103	0.61	52	1155	0.64
			PM	1800	758	0.42	0	758	0.42
Notes:									
1. Ramp capacities were obtained from the Highway Capacity Manual 2000, and considered the free-flow speed, and the number of lanes on the ramp.									
2. Existing peak hour volumes are obtained from personal communication with Caltrans staff Jordan Chan on September 17, 2015.									

Freeway Ramps under Cumulative Conditions

The volume throughput of the studied freeway ramps are limited by the constraints of nearby intersections. As Table 10 shows, all ramps currently operate well-below capacity. Under cumulative conditions, even if the ramp volumes increase by 20%, they would still operate below capacity. Therefore, the project impact on freeway ramps under cumulative conditions would be less than significant.

5. Cumulative Conditions

This chapter describes cumulative traffic conditions both with and without the proposed project. Cumulative conditions reflect the traffic conditions that are projected to occur in the future if all of the development projects that have been proposed in the study area were constructed and occupied. Cumulative traffic volumes reflect traffic generated by the approved development projects (as included in the Background scenario) and other proposed but not yet approved (pending) development projects. This chapter describes the procedure used to determine cumulative traffic volumes and the resulting traffic conditions, as well as the cumulative plus project conditions.

Roadway Network

It is assumed in this analysis that the transportation network under cumulative conditions would be the same as that described under existing conditions.

Pending Developments

Pending developments are those that have been proposed to local agencies but have not been approved. The pending project list was obtained from the Town of Los Gatos and is included in Appendix B. Based on a review of traffic studies prepared for these projects, a recent TRAFFIX file provided by the Town of Los Gatos, the types and sizes of these developments, and their distances from the project site, the following pending developments are expected to add traffic to at least one of the study intersections during at least one of the peak hour periods:

Pending Developments

1. Dell Avenue Area Plan (Campbell): Add approx. 3 million s.f. office
2. Los Gatos High School: Construct improvements and expand by 200 students
3. 15600 and 15650 Los Gatos Blvd: Demolish auto dealership and build commercial buildings
4. 16212 Los Gatos Blvd: 11 homes subdivision
5. 15500 Los Gatos Blvd: Buick site redevelopment
6. 201-225 Los Gatos-Saratoga Road: Demolish 3,250 s.f. specialty retail space and 8,156 s.f. general office space and construct 17,654 s.f. electric car dealership or mixed commercial use
7. Samaritan Medical Master Plan: Construct 475,250 s.f. medical office
8. 2425 Samaritan Drive: Hospital expansion
9. Twin Oaks: 10-home subdivision
10. 258 Union Ave: 7-home subdivision
11. Housing Element Affordable Housing Overlay Zone (AHOZ): 5 residential projects
12. 15860 Winchester: Demolish 4 and construct 11 single-family homes

Cumulative (No Project) Traffic Volumes

Cumulative peak hour traffic volumes were calculated by adding to background volumes the estimated traffic from the pending developments. Vehicle trips for each of the pending projects were obtained from the TRAFFIX file provided by the Town of Los Gatos or from the project's traffic impact study. The estimated trips were assigned to the study intersections according to the distributions and assignments identified in the Town's TRAFFIX file or the relevant traffic studies. Cumulative traffic volumes are shown graphically on Figure 13.

Cumulative (No Project) Intersection Levels of Service

The results of the intersection level of service analysis under cumulative conditions without the proposed project are summarized in Table 11. Under cumulative conditions, all signalized study intersections are expected to operate at LOS D during both the AM and PM peak hours.

Table 11
Cumulative Intersection Levels of Service Summary

Study Number	Intersection	Peak Hour	Cumulative		Cumulative + Project			
			Avg. Delay (sec)	LOS	Avg. Delay (sec)	LOS	Incr. In Crit. Delay (sec)	Incr. In Crit. V/C
1	N. Santa Cruz Ave & Los Gatos-Saratoga Rd *	AM	50.2	D	50.2	D	0.0	0.001
		PM	40.9	D	41.0	D	0.1	0.001
2	University Ave & Los Gatos-Saratoga Rd *	AM	35.1	D	35.2	D	0.1	0.002
		PM	31.1	C	31.0	C	0.1	0.001
3	Alberto Way & Los Gatos-Saratoga Rd	AM	11.2	B	14.4	B	5.5	0.071
		PM	12.5	B	15.2	B	2.8	0.036
4	Los Gatos Blvd & Los Gatos-Saratoga Rd	AM	24.2	C	24.3	C	0.1	0.002
		PM	26.8	C	27.1	C	0.3	0.007
5	Los Gatos Blvd & Caldwell Ave/Kennedy Rd	AM	44.5	D	45.7	D	2.0	0.008
		PM	32.5	C	33.0	C	0.8	0.007

Notes:
* Denotes CMP intersection

Cumulative Plus Project Traffic Volumes

The net new peak hour trips generated by the project were added to cumulative traffic volumes to obtain cumulative plus project traffic volumes (see Figure 14). The net project trips and the trip distribution pattern used to assign them to the roadway system were discussed in Chapter 4. Traffic volumes for all components of traffic are tabulated in Appendix C.

401 Alberto Way - Transportation Impact Analysis

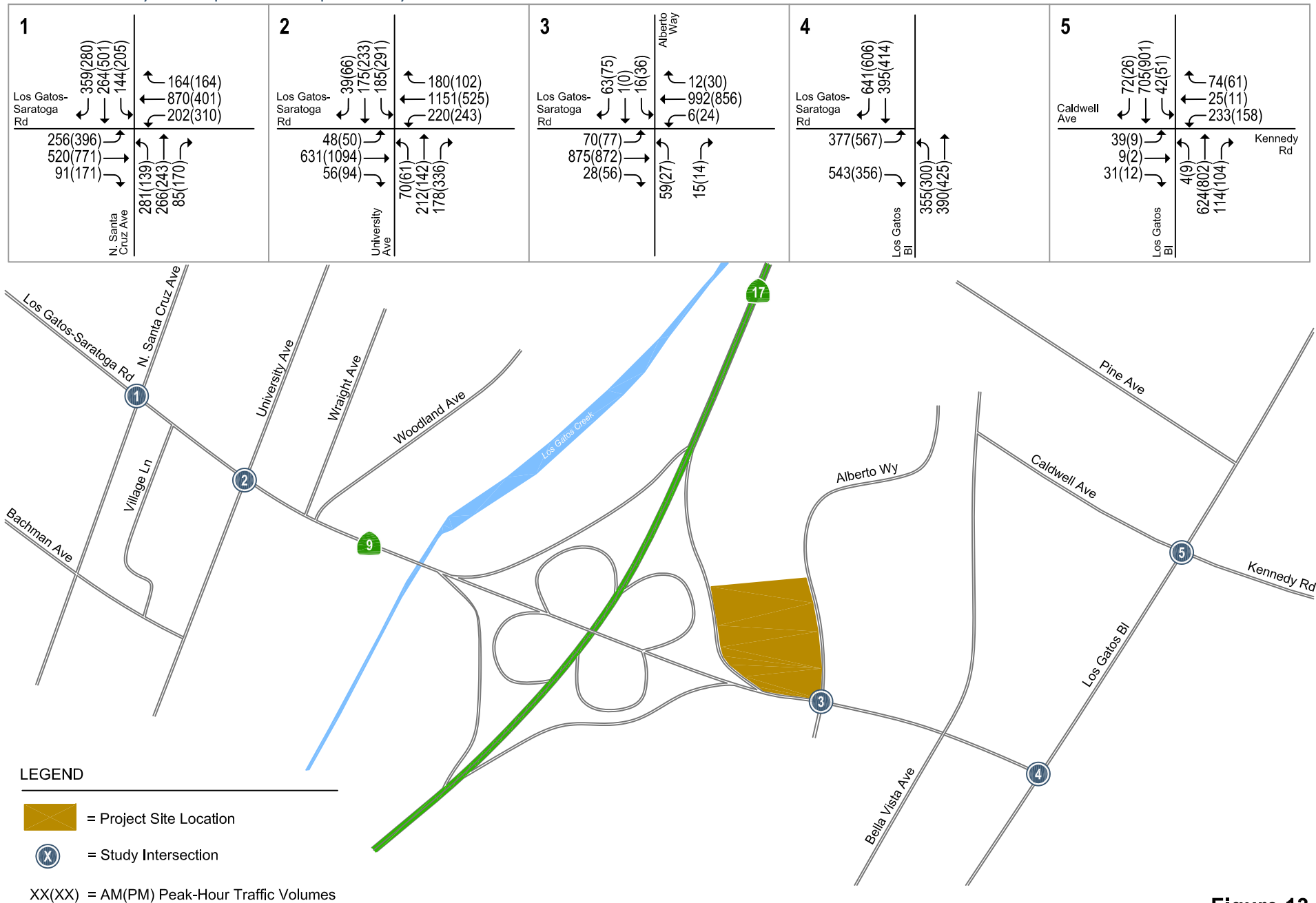


Figure 13
Cumulative Baseline Traffic Volumes

401 Alberto Way - Transportation Impact Analysis

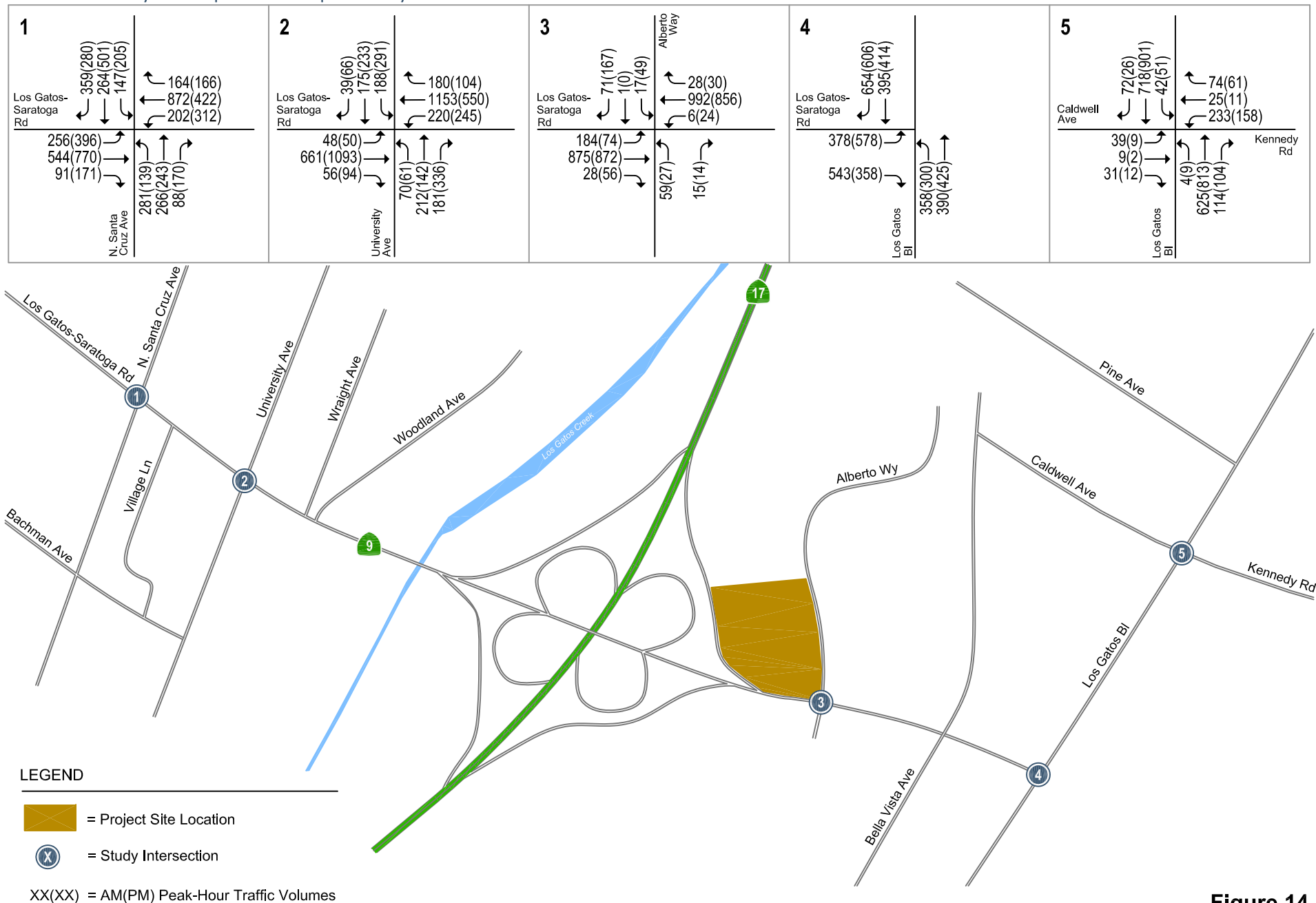


Figure 14
Cumulative Plus Project Traffic Volumes

Intersection LOS Under Cumulative Plus Project Conditions

The results of the intersection level of service analysis under cumulative plus project conditions show that the study intersections would operate at an acceptable level of service (LOS D) during both the AM and PM peak hours of traffic (see Table 11).

At the intersection of Alberto Way and Los Gatos-Saratoga Road, the level of service presented in Table 11 assumes the proposed improvement to restripe Alberto Way to include a dedicated right-turn lane and a shared left-through lane. When analyzed without the proposed improvement on Alberto Way, this intersection would continue to operate at LOS B during both the AM and PM peak hours with minimal changes to critical delay and critical V/C.

Even though the project would not have a significant impact on the study intersections, it would be required to pay a Traffic Impact Fee, as does all new development in the Town of Los Gatos. The Town's Traffic Impact Fee is unrelated to whether or not a project has any impacts under CEQA, and is required of all new development projects that generate additional trips on the Town's roadway network. The current fee is \$879 per new trip generated, as approved by the Town Council on March 24, 2014. The project is expected to generate a net new 700 daily trips. The associated traffic impact fee is \$615,300. The purpose of the fee is to help fund transportation projects that are needed to accommodate vehicle trip growth. Among the projects that will be funded with Traffic Impact Fees are three that are on SR 9, near the project site:

- Intersection Improvements at SR 9 and N. Santa Cruz Avenue;
- SR 9 - Los Gatos Creek Trail connector – New path and bridge for bikes and pedestrians;
- Complete Streets Improvements – SR 9 from University Avenue to Los Gatos Blvd.

6. Other Transportation Issues

This chapter presents an analysis of other transportation issues associated with the project site, including:

- Operations analysis – vehicle queuing and storage at selected intersections,
- Potential impacts to transit, pedestrian and bicycle facilities,
- Site access, on-site circulation, and
- Parking.

Unlike the level of service impact methodology, which is adopted by the Town of Los Gatos, the analyses in this chapter are based on professional judgment in accordance with the standards and methods employed by the traffic engineering community.

Although operational issues are not considered CEQA impacts, they do describe traffic conditions that are relevant to describing the project environment.

Operations Analysis

Vehicle queues were estimated using a Poisson probability distribution, which estimates the probability of “n” vehicles for a vehicle movement using the following formula:

$$P(x = n) = \frac{\lambda^n e^{-(\lambda)}}{n!}$$

Where:

$P(x = n)$ = probability of “n” vehicles in queue per lane

n = number of vehicles in the queue per lane

λ = Average number of vehicles in the queue per lane (vehicles per hour per lane/signal cycles per hour)

The operations analysis is based on vehicle queuing for high-demand left-turn movements at intersections where 10 or more project trips were added. Vehicle queues were estimated using a Poisson probability distribution. The basis of the analysis is as follows: (1) the Poisson probability distribution is used to estimate the 95th percentile maximum number of queued vehicles for a particular movement; (2) the estimated maximum number of vehicles in the queue is translated into a queue length, assuming 25 feet per vehicle; and (3) the estimated maximum queue length is compared to the existing or planned available storage capacity for the movement to determine if adequate storage is available to accommodate the 95th percentile queues. This analysis thus provides a basis for estimating future storage requirements at intersections.

Vehicle queues were analyzed at the intersection of Alberto Way and Los Gatos-Saratoga Road for the southbound leg of Alberto Way and the eastbound left-turn movement on Los Gatos-Saratoga Road. The southbound leg of Alberto Way was analyzed to determine whether queues would block the proposed southern driveway location (215 feet north of the intersection). The vehicle queuing estimates at these two locations are provided in Table 12. Hexagon performed field observations at this intersection to determine the average queue length. The reported existing queue lengths match our observations.

In order to accommodate left turn queues with the project, Hexagon recommends extending the eastbound left-turn pocket on Los Gatos-Saratoga Road to 250 feet. The existing 150 feet left-turn storage space would be insufficient to contain the queue with the project. With the proposed improvement to extend the eastbound left-turn lane to 250 feet, the 95th percentile queue during both the AM and PM peak hours would be sufficiently contained within the turn pocket. The applicant has agreed to make this improvement. Based on community input, Hexagon also recommends restriping the southbound leg of Alberto Way to include a right-turn lane and a shared left-through lane. Although not required to mitigate project impacts, the applicant has agreed to make this improvement. A dedicated right-turn lane would allow right-turn vehicles to bypass left-turn vehicles and turn onto westbound Los Gatos-Saratoga Road when Alberto Way has the red light and there are sufficient gaps to perform the turn.

The driveway on the east side of Alberto Way for the Best Western Inn is located approximately 125 feet north of the intersection. The queuing analysis shows that during the PM peak hour under all but the existing conditions, the 95th percentile queue on the southbound right-turn lane on Alberto Way (between 150 and 200 feet) would block vehicles at the Best Western driveway from turning into the right-turn lane. The 95th percentile queue in the southbound shared left-through lane on Alberto Way would not block the Best Western driveway. The 95th percentile queue during the PM peak hour in the southbound right-turn lane on Alberto Way would comprise eight vehicles. It is expected that the existing signal at the Alberto Way intersection would be able to clear all vehicles within each cycle. Right-turn vehicles on Alberto Way also will be able to turn onto westbound Los Gatos-Saratoga Road when there are sufficient gaps in westbound traffic on Los Gatos-Saratoga Road. Therefore, it is expected that vehicles at the Best Western driveway would be able to turn onto Alberto Way with minimal delays.

Recommendations

Although not related to project impacts, Hexagon recommends that the signal on Los Gatos-Saratoga Road at Alberto Way be upgraded, as well as interconnected to the signal on Los Gatos-Saratoga Road at Los Gatos Boulevard. These improvements would improve vehicle progression on Los Gatos-Saratoga Road, which would help left-turn vehicles turning onto Alberto Way maneuver out of the eastbound through lanes on Los Gatos-Saratoga Road and into the left-turn lane. This would improve the eastbound left-turn green phase utilization on Los Gatos-Saratoga Road, and reduce the potential for left-turn vehicles having to wait extra cycles to be able to clear the intersection and lengthening the left-turn queue. The project applicant has agreed to make these improvements.

Table 12
Queuing Analysis

Measurement	Alberto Way & Los Gatos-Saratoga Road					
	SB/SBT-L ³		SBR ³		EBL ⁴	
	AM	PM	AM	PM	AM	PM
Existing						
Cycle/Delay ¹ (sec)	90	90			90	90
Volume (vphpl)	79	103			69	68
Avg. Queue (veh./ln.)	2.0	2.6			1.7	1.7
Avg. Queue ² (ft./ln)	49	64	N/A		43	43
95th %. Queue (veh./ln.)	5	5			4	4
95th %. Queue (ft./ln)	125	125			100	100
Storage (ft./ ln.)	215	215			150	150
Adequate (Y/N)	Y	Y			Y	Y
Existing plus Project						
Cycle/Delay ¹ (sec)	90	90	90	90	90	90
Volume (vphpl)	18	45	70	163	183	65
Avg. Queue (veh./ln.)	0.5	1.1	1.8	4.1	4.6	1.6
Avg. Queue ² (ft./ln)	11	28	44	102	114	41
95th %. Queue (veh./ln.)	2	3	4	8	8	4
95th %. Queue (ft./ln)	50	75	100	200	200	100
Storage (ft./ ln.)	215	215	215	215	250	250
Adequate (Y/N)	Y	Y	Y	Y	Y	Y
Background						
Cycle/Delay ¹ (sec)	90	90			90	90
Volume (vphpl)	80	111			70	77
Avg. Queue (veh./ln.)	2.0	2.8			1.8	1.9
Avg. Queue ² (ft./ln)	50	69	N/A		44	48
95th %. Queue (veh./ln.)	5	6			4	4
95th %. Queue (ft./ln)	125	150			100	100
Storage (ft./ ln.)	215	215			150	150
Adequate (Y/N)	Y	Y			Y	Y
Background plus Project						
Cycle/Delay ¹ (sec)	90	90	90	90	90	90
Volume (vphpl)	18	49	71	167	184	74
Avg. Queue (veh./ln.)	0.5	1.2	1.8	4.2	4.6	1.9
Avg. Queue ² (ft./ln)	11	31	44	104	115	46
95th %. Queue (veh./ln.)	2	3	4	8	8	4
95th %. Queue (ft./ln)	50	75	100	200	200	100
Storage (ft./ ln.)	215	215	215	215	250	250
Adequate (Y/N)	Y	Y	Y	Y	Y	Y
1. Vehicle queue calculations based on cycle length for signalized intersections, and movement delay for unsignalized intersections.						
2. Assumes 25 Feet Per Vehicle Queued.						
3. Under project conditions, the studied southbound leg is restriped to one right-turn and one shared left-through lane.						
4. Under project conditions, the studied eastbound left-turn pocket is proposed to be extended to 250 feet.						

Table 12 ... Continued
Queuing Analysis

Measurement	Alberto Way & Los Gatos-Saratoga Road					
	SB/SBT-L ³		SBR		EBL ⁴	
	AM	PM	AM	PM	AM	PM
Cumulative						
Cycle/Delay ¹ (sec)	90	90			90	90
Volume (vphpl)	80	111			70	77
Avg. Queue (veh./ln.)	2.0	2.8			1.8	1.9
Avg. Queue ² (ft./ln.)	50	69	N/A		44	48
95th %. Queue (veh./ln.)	5	6			4	4
95th %. Queue (ft./ln.)	125	150			100	100
Storage (ft./ ln.)	215	215			150	150
Adequate (Y/N)	Y	Y			Y	Y
Cumulative plus Project						
Cycle/Delay ¹ (sec)	90	90	90	90	90	90
Volume (vphpl)	18	49	71	167	184	74
Avg. Queue (veh./ln.)	0.5	1.2	1.8	4.2	4.6	1.9
Avg. Queue ² (ft./ln.)	11	31	44	104	115	46
95th %. Queue (veh./ln.)	2	3	4	8	8	4
95th %. Queue (ft./ln.)	50	75	100	200	200	100
Storage (ft./ ln.)	215	215	215	215	250	250
Adequate (Y/N)	Y	Y	Y	Y	Y	Y
<ol style="list-style-type: none"> 1. Vehicle queue calculations based on cycle length for signalized intersections, and movement delay for unsignalized intersections. 2. Assumes 25 Feet Per Vehicle Queued. 3. Under project conditions, the studied southbound leg is restriped to one right-turn and one shared left-through lane. 4. Under project conditions, the studied eastbound left-turn pocket is proposed to be extended to 250 feet. 						

Bicycles, Pedestrians and Transit

The project site is not connected to any existing bike facility within the immediate project vicinity. Nearby bicycle facilities within the project vicinity include bike lanes on both sides of Los Gatos Boulevard, on eastbound Los Gatos-Saratoga Road between the Bella Vista Avenue overpass and Los Gatos Boulevard, and on both sides of Los Gatos-Saratoga Road west of Wright Avenue. The Los Gatos Creek Trail runs parallel to SR 17 on the west side, but provides no access to the project site.

The Town of Los Gatos *2020 General Plan* proposed a list of bicycle facility improvements within the Town of Los Gatos. Since the publication of the General plan, all proposed improvements relative to enhancing bicycle connectivity of the project site have been completed. The *Highway 9 Safety Improvement Project* has identified a connecting ramp from the Los Gatos Creek Trail to Los Gatos-Saratoga (SR 9) at University Avenue as part of their Phase II projects. At the time of this report, funding remains to be secured for the proposed connecting ramp.

Access to the project site via Los Gatos Boulevard would require bikers to share the road with vehicles for 800 feet on Los Gatos-Saratoga Road, which would be adequate for experienced cyclists. The lack of bicycle facilities leading to the site means that inexperienced cyclists would not be encouraged to ride to the project. The Town's planned Complete Streets project on Los-Gatos-Saratoga Road (Highway 9) could improve conditions for cyclists. The project would be required to contribute to this project via the Town's traffic impact fee.

At the intersection of Alberto Way and Los Gatos-Saratoga Road, the project voluntarily proposes to restripe the southbound leg of Alberto Way to include a right-turn lane and a shared left-through lane. The stop-bar for the shared left-through lane would be set back for a bike box. The proposed bike box would increase bicyclist visibility for drivers and enhance bicyclist safety crossing the intersection. The conceptual drawings for the proposed off-site improvements are shown on Figure 12 in Chapter 4.

Pedestrian activity could occur between the site and downtown Los Gatos, located approximately ½ mile west, and the closest bus stops, located about ½ mile to the west and ¼ mile to the east. While adequate, the pedestrian facilities could be improved. There are no sidewalks or crosswalks on the south side of Los Gatos-Saratoga Road through the SR 17 interchange, only on the north side. The project would be required to pay a transportation impact fee, which could be used to upgrade the pedestrian facilities in the area.

As shown on Figure 12 in Chapter 4, the project applicant voluntarily proposes to provide detached sidewalks with a landscape buffer on Alberto Way along the project site frontage, as well as on the north side of Los Gatos-Saratoga Road between Alberto Way and the SR 17 northbound on-ramp. Detached sidewalks with a landscape buffer would provide a wider buffer area between pedestrians and on-street vehicles.

There is no transit service on Los Gatos-Saratoga Road in front of the site. The closest service is about ¼ mile east on Los Gatos Boulevard or ½ mile west at N. Santa Cruz Avenue. Sidewalks are present to facilitate pedestrian movements between the project site and these transit stops.

Recommendations

While not required to improve Level of Service or to mitigate impacts related to traffic, it is recommended that the proposed project implement the voluntary improvements to provide the bike box on Alberto Way at the intersection with Los Gatos-Saratoga Road, as well as the detached sidewalks with a landscape buffer on Alberto Way along the project site frontage, and on the north side of Los Gatos-Saratoga Road between Alberto Way and the SR 17 northbound on-ramp.

Site Access and Circulation

This section describes the site access and circulation of the proposed project. This review is based on project site plans prepared by Arc Tec Inc. dated October 5, 2015 (see Figure 2).

Site Access

Site access was evaluated to determine the adequacy of the site driveways with regard to corner sight distance and traffic volumes. The proposed project would have one full-access driveway and one exit-only driveway on Alberto Way. The northern full-access driveway would provide access to a 7-space surface parking lot as well as the two-level below-grade parking garage. The 7-space surface parking lot would have a one-way semicircular drive aisle, connecting to the southern exit-only driveway. Queuing analysis (Table 12) has indicated that neither driveway would be blocked by the southbound queue at the intersection of Alberto Way and Los Gatos-Saratoga Road. Therefore, access to the project driveways would be adequate under all analyzed scenarios.

Corner Sight Distance

The project access points should be free and clear of any obstructions to optimize sight distance, thereby ensuring that exiting vehicles can see pedestrians on the sidewalk and other vehicles traveling on adjacent roadways. Landscaping and parking should not conflict with a driver's ability to locate a gap in traffic and see oncoming pedestrians and bicyclists. Adequate corner sight distance (sight distance triangles) should be provided at all site access points in accordance with the City's standards. Sight distance triangles should be measured approximately 15 feet back from the traveled way.

Sight distance requirements vary depending on the roadway speeds. The speed limit on Alberto Way is 25 mph. The Caltrans recommended stopping sight distance for this roadway is 150 feet.

Alberto Way is slightly curved at the two driveway locations, but the curves do not block a driver's view 150 feet down the road. No tall landscaping or signs exist near the driveways that would obstruct a driver's view. On-street parking is currently permitted between the two driveways. The parked vehicles block a driver's view at the south exit-only driveway, thereby obstructing visibility of southbound vehicles on Alberto Way, and block a driver's view of northbound vehicles at the north full-access driveway.

Recommendations

Parking on southbound Alberto Way between the two driveways should be prohibited to ensure adequate sight distance.

On-Site Circulation

All driveway and drive-aisle widths are at least 24 feet wide, and comply with the minimum requirements established in the Town of Los Gatos Code of Ordinances Section 29.10.155. All parking stalls within the parking garage are 18 feet in length (16 feet with 2 feet overhang) and 8 feet 6 inches in width, which meet the town's requirements.

Emergency Vehicles, Truck Access and Circulation

The site plan shows that the trash pick-up area is at the northern driveway just before the ramps. Garbage trucks would exit using the south exit-only driveway via the semi-circular surface drive-aisle. All driveways and drive-aisles are at least 24 feet wide, which are adequate for emergency vehicle access and circulation.

Parking

For office use at the project site, the Town of Los Gatos Municipal Code Section 29.10.145 requires parking to be provided at the rate of 1 parking space per 250 square feet of gross floor area. The project proposes two office buildings totaling 92,800 square feet, which by code would be required to provide 372 parking spaces. The project site plan provides 395 parking spaces. Therefore, the parking provision as shown on the current project site plans would meet the Town standards.

Per the California Building Code (CBC) Table 11B-6, eight (8) accessible spaces are required for parking garages with 301 to 400 parking spaces. Of the required accessible parking spaces, one van accessible space is required. As shown on the site plan, the project would provide eight (8) accessible parking spaces, of which two (2) are accessed via the southern driveway, and the remaining six (6) are located in the upper level of the below-grade garage near the elevators. The project site plan does not label which one of the eight (8) parking spaces is van accessible.

The proposed restriping of Alberto Way would eliminate on-street parking spaces on Alberto Way along the Best Western frontage. Hexagon also has recommended to prohibit parking on Alberto Way along the project building frontage for sight distance issues exiting the project site. There is approximately 70 feet of on-street parking along the Best Western frontage, and approximately 130 feet of on-street parking along the project frontage. Combined, the proposed project would eliminate approximately eight vehicle-spaces of on-street parking on Alberto Way. The five parking spaces along the project frontage could be accommodated by the project parking garage. The removed parking spaces along the Best Western frontage are assumed to be accommodated by its own parking facility.

Recommendations

The project is recommended to identify the van accessible parking space within the eight accessible parking spaces. Hexagon recommends the project prohibit parking on Alberto Way along the project building frontage to enhance sight distance for exiting vehicles.

7. Conclusions

This study was conducted for the purpose of identifying the potential traffic impacts related to the proposed development. The potential impacts of the project were evaluated in accordance with the standards set forth by the Town of Los Gatos and the Santa Clara County Valley Transportation Authority (VTA) Congestion Management Plan (CMP).

Per CMP technical guidelines, a freeway segment level of service analysis is required when a project would add trips greater than one percent of a segment's capacity. Although the proposed project would add trips greater than one percent of capacity on southbound SR 17 from Lark Avenue to Los Gatos-Saratoga Road during the AM peak hour, this freeway segment is currently operating at an acceptable LOS D during the AM peak hour. The increase in segment trips would not significantly impact the freeway LOS. Project impacts on other transportation categories, such as vehicle queuing, pedestrian, bicycle and transit facilities, site access and on-site circulation, were determined on the basis of engineering judgment.

Intersection Levels of Service

The intersection level of service analysis concluded that all study intersections would operate at acceptable levels of service (LOS D or better) under all study scenarios. Therefore, the proposed project would have an insignificant impact on intersection levels of service.

Operations Analysis

Operational issues are not considered CEQA impacts. They are included for informational purposes.

In order to accommodate left turn queues with the project, Hexagon recommends extending the eastbound left-turn pocket on Los Gatos-Saratoga Road to 250 feet. The existing 150 feet left-turn storage space would be insufficient to contain the queue with the project. With the proposed improvement to extend the eastbound left-turn lane to 250 feet, the 95th percentile queue during both the AM and PM peak hours would be sufficiently contained within the turn pocket. The applicant has agreed to make this improvement. Based on community input, Hexagon also recommends restriping the southbound leg of Alberto Way to include a right-turn lane and a shared left-through lane. Although not required to mitigate project impacts, the applicant has agreed to make this improvement. A dedicated right-turn lane would allow right-turn vehicles to bypass left-turn vehicles and turn onto westbound Los Gatos-Saratoga Road when Alberto Way has the red light and there are sufficient gaps to perform the turn.

The driveway on the east side of Alberto Way for the Best Western Inn is located approximately 125 feet north of the intersection. The queuing analysis shows that during the PM peak hour under all but the existing conditions, the 95th percentile queue on the southbound right-turn lane on Alberto Way (between 150 and 200 feet) would block vehicles at the Best Western driveway from turning into the right-turn lane. The 95th percentile queue in the southbound shared left-through lane on Alberto Way would not block the Best Western driveway. The 95th percentile queue during the PM peak hour in the southbound right-turn lane on Alberto Way would comprise eight vehicles. It is expected that the existing signal at the Alberto Way intersection would be able to clear all vehicles within each cycle. Right-turn vehicles on Alberto Way also will be able to turn onto westbound Los Gatos-Saratoga Road when there are sufficient gaps in westbound traffic on Los Gatos-Saratoga Road. Therefore, it is expected that vehicles at the Best Western driveway would be able to turn onto Alberto Way with minimal delays.

Recommendations

Although not related to project impacts, Hexagon recommends that the signal on Los Gatos-Saratoga Road at Alberto Way be upgraded, as well as interconnected to the signal on Los Gatos-Saratoga Road at Los Gatos Boulevard. These improvements would improve vehicle progression on Los Gatos-Saratoga Road, which would help left-turn vehicles turning onto Alberto Way maneuver out of the eastbound through lanes on Los Gatos-Saratoga Road and into the left-turn lane. This would improve the eastbound left-turn green phase utilization on Los Gatos-Saratoga Road, and reduce the potential for left-turn vehicles having to wait extra cycles to be able to clear the intersection and lengthening the left-turn queue. The project applicant has agreed to make these improvements.

Bicycles, Pedestrians and Transit

The project site is not connected to nearby bicycle facilities. Access to the project site via Los Gatos Boulevard would require bikers to share the road with vehicles for 800 feet on Los Gatos-Saratoga Road, which would be adequate for experienced cyclists. The lack of bicycle facilities leading to the site means that inexperienced cyclists would not be encouraged to ride to the project. The Town's planned Complete Streets project on Los-Gatos-Saratoga Road (Highway 9) could improve conditions for cyclists. The project would be required to contribute to this project via the Town's traffic impact fee.

While not required as CEQA mitigation or to address traffic operations, the project voluntarily proposes to restripe the southbound leg of Alberto Way to include a right-turn lane and a shared left-through lane. At the intersection of Alberto Way and Los Gatos-Saratoga Road, the stop-bar for the shared left-through lane would be set back for a voluntarily proposed bike box. The proposed bike box would increase bicyclist visibility for drivers and enhance bicyclist safety crossing the intersection. The conceptual drawings for the proposed improvements are shown on Figure 12 in Chapter 4.

Pedestrian activity could occur between the site and downtown Los Gatos, located approximately ½ mile west, and the closest bus stops, located about ½ mile to the west and ¼ mile to the east. While adequate, the pedestrian facilities could be improved. There are no sidewalks or crosswalks on the south side of Los Gatos-Saratoga Road through the SR 17 interchange, only on the north side. The project would be required to pay a transportation impact fee, which could be used to upgrade the pedestrian facilities in the area.

As shown on Figure 12 in Chapter 4, the project applicant voluntarily proposes to provide detached sidewalks with a landscape buffer on Alberto Way along the project site frontage, as well as on the north side of Los Gatos-Saratoga Road between Alberto Way and the SR 17 northbound on-ramp. Detached sidewalks with a landscape buffer would provide a wider buffer area between pedestrians and on-street vehicles.

There is no transit service on Los Gatos-Saratoga Road in front of the site. The closest service is about ¼ mile east on Los Gatos Boulevard or ½ mile west at N. Santa Cruz Avenue. Sidewalks are present to facilitate pedestrian movements between the project site and these transit stops.

Recommendations

While not required to improve Level of Service or to mitigate impacts related to traffic, it is recommended that the proposed project implement the voluntary improvements to provide the bike box on Alberto Way at the intersection with Los Gatos-Saratoga Road, as well as the detached sidewalks with a landscape buffer on Alberto Way along the project site frontage, and on the north side of Los Gatos-Saratoga Road between Alberto Way and the SR 17 northbound on-ramp.

Site Access and Circulation

Site access was evaluated to determine the adequacy of the site driveways with regard to corner sight distance and traffic volumes. The proposed project would have one full-access driveway and one exit-only driveway on Alberto Way. The northern full-access driveway would provide access to a 7-space surface parking lot as well as the two-level below-grade parking garage. The 7-space surface parking lot would have a one-way semicircular drive aisle, connecting to the southern exit-only driveway. Queuing analysis has indicated that neither driveway would be blocked by the southbound queue at the intersection of Alberto Way and Los Gatos-Saratoga Road. Therefore, access to the project driveways would be adequate under all analyzed scenarios.

Corner Sight Distance

Sight distance requirements vary depending on the roadway speeds. The speed limit on Alberto Way is 25 mph. The Caltrans recommended stopping sight distance for this roadway is 150 feet. The site plan shows no tall landscaping or signs near either driveway that would block a driver's view. Sight distance for the southern driveway would be adequate. Alberto Way is slightly curved at the two driveway locations, but the curves do not block a driver's view 150 feet down the road. No tall landscaping or signs exist near the driveways that would obstruct a driver's view. On-street parking is currently permitted between the two driveways. The parked vehicles block a driver's view at the south exit-only driveway, thereby obstructing visibility of southbound vehicles on Alberto Way, and block a driver's view of northbound vehicles at the north full-access driveway.

Recommendations

Parking on southbound Alberto Way between the two driveways should be prohibited to ensure adequate sight distance.

On-Site Circulation

All driveway and drive-aisle widths are at least 24 feet wide, and comply with the minimum requirements established in the Town of Los Gatos Code of Ordinances Section 29.10.155. All parking stalls within the parking garage are 18 feet in length (16 feet with 2 feet overhang) and 8 feet 6 inches in width, which meet the town's requirements.

Emergency Vehicles, Truck Access and Circulation

The site plan shows that the trash pick-up area is at the northern driveway just before the ramps. Garbage trucks would exit using the south exit-only driveway via the semi-circular surface drive-aisle. All driveways and drive-aisles are at least 24 feet wide, which are adequate for emergency vehicle access and circulation.

Parking

For office use at the project site, the Town of Los Gatos Municipal Code Section 29.10.145 requires parking to be provided at the rate of 1 parking space per 250 square feet of gross floor area. The project proposes two office buildings totaling 92,800 square feet, which by code would be required to provide 372 parking spaces. The project site plan provides 395 parking spaces. Parking provision as shown on the current project site plans would meet the Town standards.

Per the California Building Code (CBC) Table 11B-6, eight (8) accessible spaces are required for parking garages with 301 to 400 parking spaces. Of the required accessible parking spaces, one van accessible space is required. As shown on the site plan, the project would provide eight (8) accessible parking spaces, of which two (2) are accessed via the southern driveway, and the remaining six (6) are located in the upper level of the below-grade garage near the elevators. The project site plan does not label which one of the eight (8) parking spaces is van accessible.

The proposed restriping of Alberto Way would eliminate on-street parking spaces on Alberto Way along the Best Western frontage. Hexagon also has recommended to prohibit parking on Alberto Way along the project building frontage for sight distance issues exiting the project site. There is approximately 70 feet of on-street parking along the Best Western frontage, and approximately 130 feet of on-street parking along the project frontage. Combined, the proposed project would eliminate approximately eight vehicle-spaces of on-street parking on Alberto Way. The five parking spaces along the project frontage could be accommodated by the project parking garage. The removed parking spaces along the Best Western frontage are assumed to be accommodated by its own parking facility.

Recommendations

The project is recommended to identify the van accessible parking space within the eight accessible parking spaces. Hexagon recommends the project prohibit parking on Alberto Way along the project building frontage to enhance sight distance for exiting vehicles.

401-409 Alberto Way Office Development
Final Transportation Impact Analysis
Technical Appendices

Appendix A

New Traffic Counts

Appendix B

Town of Los Gatos Approved and Pending Projects

Appendix C

Volume Summary Tables

Appendix D

Intersection Level of Service Calculations